

# Elevator – Entrapment Procedures

*Instructor’s Guide*



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# Elevator – Entrapment Procedures

## Instructor's Guide



### Icons Used In This Guide



REVIEW slides



INDIVIDUAL ACTIVITY



ASK



WRITE



CLASSROOM ACTIVITY



Multimedia



SMALL GROUP ACTIVITY



REFER participants to

### Agenda

Topic #	Topic Title	Duration
1	Overview	30 Minutes
2	Principles of Elevator Safety	30 Minutes
3	Assessing and Responding	30 Minutes
4	Unlocking Techniques	60 Minutes
5	ASME Evacuation Procedures	120 Minutes
6	Field Trip	60 Minutes
7	Summary	30 Minutes
	<b>Total Time:</b>	360 Minutes

# Elevator – Entrapment Procedures

## *Instructor's Guide*



## **Overview**

**Purpose** The purpose of this module is to:

Provide the participant with an overview and a conceptual understanding of various procedures associated with elevator entrapment.

## **Objectives**

At the end of this lesson, the transit elevator/escalator trainee will be able to:

- Discuss the procedures associated with entrapment scenarios
- Describe entrapment response
- Demonstrate entrapment procedures according to authority-specific needs
- Describe procedures ASME A17.4
- Discuss authority-specific procedures.

## **Materials**

**Mandatory** Make sure you have the following

- PowerPoint Presentation
- Coursebook
- Quizzes
- Pencils
- ASME A17.4
- Related Specific Transit Authority Procedures

## **Optional**

You may also want the following for optional activities:

- Chalk board with chalk, large paper with marker, etc.
- Internet connection
- Lab, simulator or out of service elevator

# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 360 min

This section: 30 min ( 5 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** introduction slides

### Instructor's Notes

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### SAY

#### In your own words:

Welcome to the course on Elevator Entrapment Procedures.

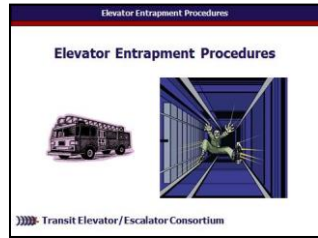
#### Advance

Riders depend on us. What would you do in this situation?

#### Advance

### Materials Needed

✓ PPT slides 1, 2



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 360 min

This section: 30 min ( 5 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** module objectives

### Instructor's Notes

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### SAY

#### In your own words:

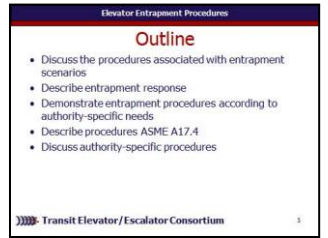
Today we will

- Discuss the procedures associated with entrapment scenarios
- Describe entrapment response
- Demonstrate entrapment procedures according to authority-specific needs
- Describe procedures ASME A17.4
- Discuss authority-specific procedures

#### **Advance**

### Materials Needed

✓ PPT slide 3



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 360 min

This section: 30 min ( 5 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** key terms

### Instructor's Notes

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### SAY

#### In your own words:

Lets take a look at some of the key words we will be defining as move through this module:

ASME A17.4

Door clutch assembly

Elevator Industry Employees' Field Safety Handbook

Entrapment tools

Halligan tool

Handbook

Irons

Manual lowering button

**Advance**

### Materials Needed

✓ PPT slide 4



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 360 min

This section: 30 min ( 5 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** key terms

### Instructor's Notes

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### SAY

**In your own words:**

- As wells as:
- Personal Protective Equipment
  - Related agency SOP and practices
  - Rescue elevator
  - Restrictor
  - Safety harness
  - Secured life line
  - Top of car operating device
  - Transit Agency Safety

**Advance**

### Materials Needed

✓ PPT slide 4



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 360 min

This section: 30 min ( 5 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**ASK** participants what they remember about safety and elevators



**SMALL GROUP ACTIVITY**



**WRITE**

### Instructor’s Notes

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### SAY

#### In your own words:

Thinking back to other courses or just in general,

What does the word entrapment mean?

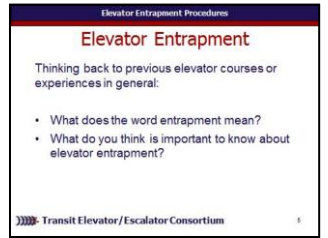
What do you think is important to know about elevator entrapment?

*[Allow participants to think for a minute and perhaps discuss with a partner ideas as well as write down any ideas. Discuss participant responses and if possible list them on a chalk board or similar.]*

**Advance**

### Materials Needed

✓PPT slide 5



**Optional:**  
Chalkboard/chalk  
or Paper/marker



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 330 min

This section: 30 min ( 13 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor's Notes

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### SAY

#### In your own words:

Each transit agency has its own elevator entrapment procedures and the course participant should follow their agency's established guidelines for elevator entrapments.

This course demonstrates techniques for moving elevator cars in hydraulic and traction systems. For other lift systems such as rack-and-pinion, inclined elevators, and chair lifts, the participant should consult with their individual transit agency regarding documented procedures on handling entrapments in those systems.

#### Advance

### Materials Needed

✓ PPT slide 6



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 330 min

This section: 30 min ( 13 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor’s Notes

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### SAY

#### In your own words:

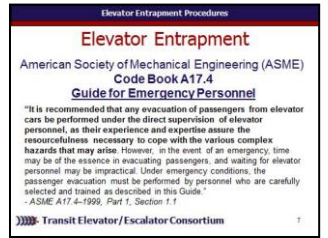
The procedures outlined in this course are compiled from the recommendations of the American Society of Mechanical Engineering (ASME) Code Book A17.4: Guide for Emergency Personnel. Sometimes this course may refer to these guidelines as **ASME A17.4** or simply “code.”

The first section of ASME A17.4 code is very clear regarding the role of the elevator technician in evacuating passengers from a stalled elevator:

#### **Advance**

### Materials Needed

✓ PPT slide 7



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 330 min

This section: 30 min ( 13 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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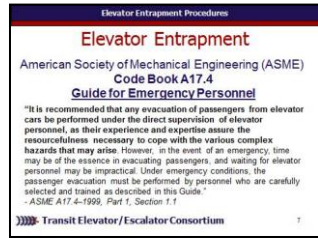
**In your own words:**

**It is recommended that any evacuation of passengers from elevator cars be performed under the direct supervision of elevator personnel, as their experience and expertise assure the resourcefulness necessary to cope with the various complex hazards that may arise.** However, in the event of an emergency, time may be of the essence in evacuating passengers, and waiting for elevator personnel may be impractical. Under emergency conditions, the passenger evacuation must be performed by personnel who are carefully selected and trained as described in this Guide.

ASME A17.4–1999, Part 1, Section 1.1

**Advance**

✓ PPT slide 7



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 330 min

This section: 30 min ( 13 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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#### In your own words:

The guidelines in ASME code place significant emphasis on the role of the elevator mechanic in managing the elevator operation during an emergency. Essentially the elevator mechanic manages two functions during an emergency: **unlocking the elevator door** and **moving the elevator car**.

This course covers these two functions in detail with the following caveats:

In every instance of an elevator entrapment, the course participant must follow the transit authority's procedures first and foremost.

Only experienced and qualified mechanics should attempt to move the elevator car.

**Do Not Advance**

✓ PPT slide 8



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 330 min

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Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor's Notes

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### SAY

#### In your own words:

This course also outlines the principles of elevator safety during emergency situations and follows ASME guidelines and best practices in the transit elevator field regarding assessing and responding to passenger entrapment.

Along with ASME A17.4, this course is guided by some of the best technical expertise on elevators in the transit environment. This course is also guided by the book, *Elevator and Escalator Rescue: A Comprehensive Guide*, written by Theodore Lee Jarboe and John O'Donoghue.

#### Advance

### Materials Needed

✓ PPT slide 8



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 330 min

This section: 30 min ( 13 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slides

#### In your own words:

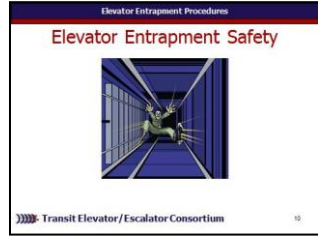
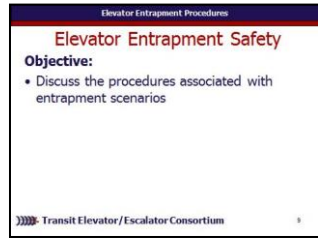
Lets start by discussing the procedures associated with entrapment scenarios

#### Advance

Transit system elevators are equipped with many safety features and devices and accidents and entrapments are rare and most stalled elevators are passenger inconveniences, not emergencies. But there is always the potential for serious injuries, even deaths, to passengers and to workers who conduct emergency evacuations. Being safe involves being aware of the potential hazards of rescuing passengers from stalled elevators. *Elevator and Escalator Rescue* suggests the following safety guidelines for avoiding potential hazards:

#### Advance

✓ PPT slides 9, 10



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 330 min

This section: 30 min ( 13 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

#### In your own words:

*Elevator and Escalator Rescue* suggests the following safety guidelines for avoiding potential hazards:

- Whenever possible, leave the occupants in the car until an elevator mechanic arrives.
- If no passenger is in danger, wait for the elevator mechanic to arrive, and then ask the mechanic to move the car to a landing and open the doors to allow passengers to exit the car in a normal fashion.
- Before any attempt is made to remove a passenger from an elevator, power must be disconnected and lockout/tagout procedures followed at the main power disconnect switch/panel located in the machine room. This is known as **power down**.

**Advance**

✓ PPT slide 11



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 330 min

This section: 30 min ( 13 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slides

### Instructor's Notes

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#### In your own words:

*Elevator and Escalator Rescue* also suggests to:

- Wear proper PPE and use fall-protection equipment such as a safety harness.
- Use lockout/tagout procedures.
- If exist, do not use an elevator side emergency exit. ASME code recognizes this as an unsafe practice of passenger removal.
- Use barricades to block hoistway openings.

#### Advance

Here is a photo of powering down and of a hoistway barricade.

#### Advance

✓ PPT slides 12, 13





# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 330 min

This section: 30 min ( 13 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

Each public transit agency has its own elevator evacuation policy where the importance of training to respond in emergency situations is paramount. The number one principle of elevator safety is that **only experienced and qualified persons should attempt rescue evacuations.**

#### Advance

Attempt a rescue evacuation **ONLY** if you have had rescue training or if the trapped passenger is in immediate danger and cannot wait for professional assistance.

#### Advance

### Materials Needed

✓ PPT slides 14, 15



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min      Time remaining: 330 min      This section: 30 min ( 13 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

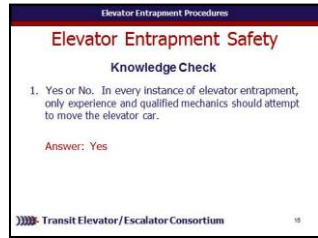
**In your own words:**  
 Lets see what we have learned so far:  
 Yes or No. In every instance of elevator entrapment, only experience and qualified mechanics should attempt to move the elevator car.  
**Call on participants for answer**  
**Advance once given the correct answer**  
 Answer: Yes

**Advance**

Yes or No. In every instance of elevator entrapment, always follow the transit authority's procedures.  
**Call on participants for answer**  
**Advance once given the correct answer**  
 Answer: Yes

**Advance**

✓ PPT slides 16, 17



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 330 min

This section: 30 min ( 13 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



ASK

**In your own words:**

During an elevator entrapment situation, the elevator mechanic manages what two functions?

**Call on participants for answer**

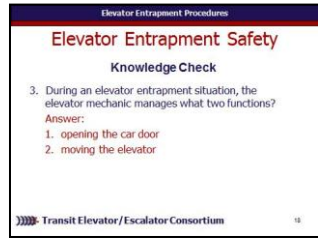
**Advance once given the correct answer**

**Answer:**

- 1. Opening the car door
- 2. Moving the elevator

**Advance**

✓ PPT slide 18



### Instructor’s Notes

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# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 300 min

This section: 30 min ( 15 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slides

**In your own words:**

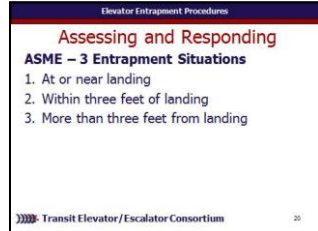
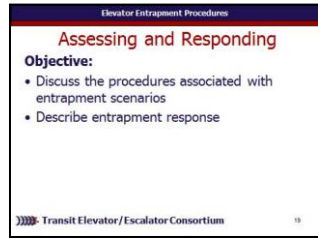
Moving on, we want to next  
- Discuss the procedures associated with entrapment scenarios  
And  
- Describe entrapment response

**Advance**

ASME code offers guidelines specific to three situations of a stalled elevator: at or near the landing; within three feet of the landing; or more than three feet of the landing. It is therefore necessary for the elevator technician to note the stalled elevator’s location with respect to the ASME guidelines and report this to the Fire Department personnel when they are on site.

**Advance**

✓ PPT slides 19, 20



### Instructor’s Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 300 min

This section: 30 min ( 15 slides) Section start time: \_\_\_\_\_

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### DO

### SAY

### Materials Needed



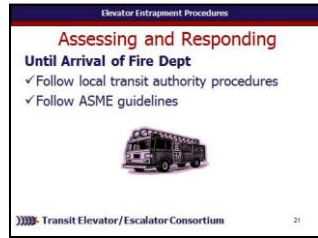
**REVIEW** slide

#### In your own words:

Until the Fire Department arrives, the elevator technician can assess and respond to the situation by following **local transit authority procedures** and ASME guidelines for evacuation procedures. Prior to conducting an evacuation, the responsible personnel in the transit station follow these steps:

#### *Advance*

✓ PPT slide 21



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 300 min

This section: 30 min ( 15 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor's Notes

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### SAY

#### In your own words:

Step 1

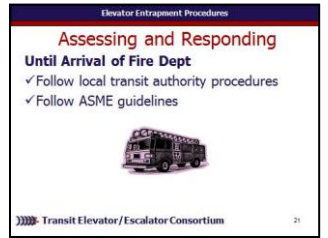
Immediately communicate with the passengers who are trapped inside the car letting them know that:

- They are safe;
- Steps are being taken to evacuate them from the elevator car;
- They should stand clear of doors since they may be opened;
- They should refrain from smoking.

#### **Advance**

### Materials Needed

✓ PPT slide 22



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 300 min

This section: 30 min ( 15 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor's Notes

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### SAY

#### In your own words:

Step 2

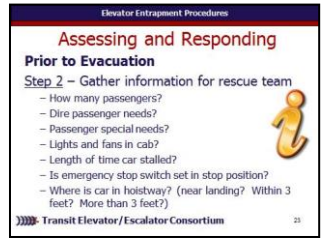
Gather the following information for the rescue team:

- How many passengers are in the elevator car?
- Are there any passengers in dire need such as medical care, water?
- Which of the passengers have special needs, for example, in a wheelchair?
- Are the lights and fan on inside the cab?
- How long has the elevator been stalled?
- Is the emergency stop switch, if provided, set in the stop position?

**Do Not Advance**

### Materials Needed

✓ PPT slide 23



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min      Time remaining: 300 min      This section: 30 min ( 15 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

**In your own words:**

- Where is the elevator car in the hoistway? Is it:
- At or near the floor landing (within a few inches of the landing floor)?
- Within 3 feet (36 inches maximum) but more than a few inches?
- More than 3 feet (36 inches or greater)?

**Advance**

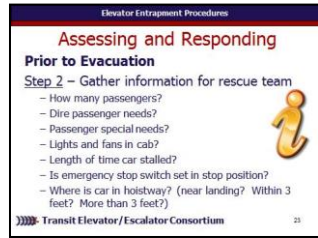
Step 3 –

- Locate elevator machine room.
- Put barricades around the elevator
- Notify the transit site manager (this may be the Building or Location Manager, Engineer, Supervisor, or Guard.)
- Determine safest method to evacuate passenger from stalled elevator.

**Advance**

### Materials Needed

✓ PPT slides 23, 24





# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 300 min

This section: 30 min ( 15 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



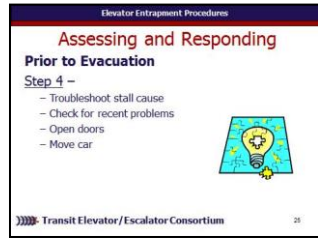
**REVIEW** slide

#### In your own words:

- Step 4 –
- Troubleshoot what caused the elevator to stall (power to the elevator needs to be turned on)
  - Check whether there have been recent problems with the elevator.
  - Open doors
  - Move car

**Advance**

✓ PPT slide 25



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 300 min

This section: 30 min ( 15 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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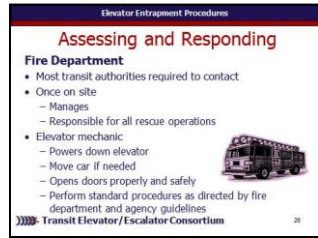
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**In your own words:**

In most instances, elevator entrapment is not life-threatening to the passengers and, it may be said, most entrapments are nothing more than inconvenience of time to passengers. Nevertheless most transit agencies treat all elevator entrapments as emergencies and, as such, the transit agency is required to contact the Fire Department and the elevator maintenance group. Once the Fire Department is on the transit site, it manages and is responsible for all rescue operations and the entrapment situation. The elevator mechanic should be there to power down the elevator, move the car if necessary, open its doors properly and safely, and perform other standard procedures as directed by the Fire Department and agency guidelines.

**Advance**

✓ PPT slide 26



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 300 min

This section: 30 min ( 15 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

If the elevator is stalled because of a power outage, the elevator technician should consult with their supervisor, control center or with the site manager and follow the transit agency's guidelines for elevator entrapment.

#### Advance

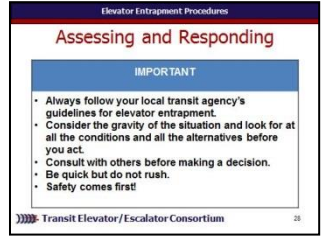
Important tips to remember:

- Always follow your local transit agency's guidelines for elevator entrapment.
- Consider the gravity of the situation and look for at all the conditions and all the alternatives before you act.
- Consult with others before making a decision.
- Be quick but do not rush.
- Safety comes first!

#### Advance

### Materials Needed

✓ PPT slides 27, 28



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 300 min

This section: 30 min ( 15 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

### Instructor’s Notes

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**In your own words:**

Lets see what we have learned so far:  
ASME offers guidelines for three entrapment situations including

- a. At or near the landing
- b. Within three feet of the landing
- c. Within five feet of the landing
- d. More than three feet of the landing
- e. More than five feet of the landing

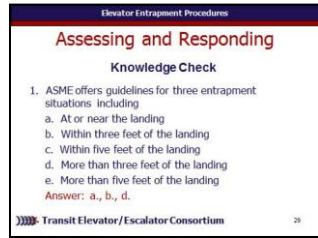
**Call on participants for answer**

**Advance once given the correct answer**

**Answer: a., b., d.**

**Advance**

✓PPT slide 29



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 300 min

This section: 30 min ( 15 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

### Instructor's Notes

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**In your own words:**

\_\_\_\_\_ is information gathered by the mechanic and needed for the rescue team prior to evacuation. (check all that apply)

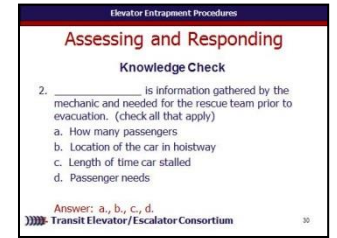
- a. How many passengers
- b. Location of the car in hoistway
- c. Length of time car stalled
- d. Passenger needs

**Call on participants for answer**  
**Advance once given the correct answer**

Answer: a., b., c., d.

**Advance**

✓ PPT slide 30



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 300 min

This section: 30 min ( 15 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

### Instructor's Notes

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**In your own words:**

Communicating with the passengers is part of \_\_\_\_\_ to complete prior to evacuation.

- a. Step 1
- b. Step 2
- c. Step 3
- d. Step 4

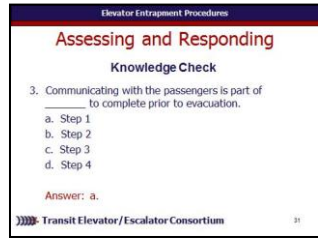
**Call on participants for answer**

**Advance once given the correct answer**

**Answer: a.**

**Advance**

✓ PPT slide 31



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: min

Time remaining: min

This section: min ( slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

**In your own words:**

In most instances, the \_\_\_\_\_ is responsible for all rescue operations once on site.

- a. Transit authority
- b. Elevator mechanic
- c. Fire department
- d. Customer

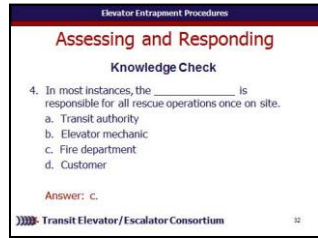
***Call on participants for answer***

***Advance once given the correct answer***

**Answer: c.**

**Advance**

✓ PPT slide 32



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 300 min

This section: 30 min ( 15 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

### Instructor's Notes

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**In your own words:**

In every instance of elevator entrapment, the mechanic should follow \_\_\_\_\_ procedures.

- a. Transit authority
- b. Elevator mechanic
- c. Fire department
- d. Customer

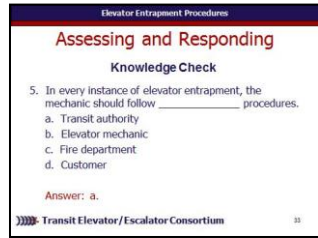
**Call on participants for answer**

**Advance once given the correct answer**

**Answer: a.**

**Advance**

✓ PPT slide 33





# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

Moving on, we want to continue to discuss the procedures associated with entrapment scenarios and describe entrapment response. We also want to begin to discuss and practice demonstrating entrapment procedures according to authority-specific needs with specific regard to door and car techniques.

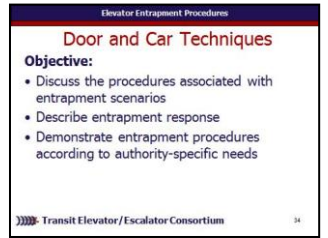
#### **Advance**

Elevator mechanics and fire firefighters are keenly aware of several techniques of unlocking the doors of a stalled elevator. Though these techniques appear simple, they should not be attempted until the power is removed from the elevator and unless the rescuer has been adequately experienced and qualified in applying these techniques.

#### **Advance**

### Materials Needed

✓ PPT slides 34, 35



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min      Time remaining: 270 min      This section: 60 min ( 33 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

**In your own words:**

If the cab is equipped with windows that can be opened and passengers are able, have them check that there is no debris or paper stuck in the window sills. These types of windows have safety devices that will stop the car.

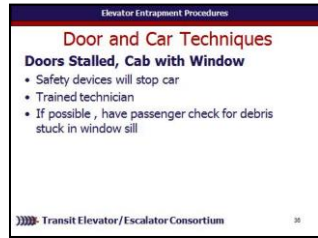
**Advance**

Again, A trained technician should place the flat palms of both hands, very near the top of each hoistway door segment and wiggle the doors left to right and back and forth. This may alleviate the problem allowing the elevator car to continue to its next stop.

**Advance**

### Materials Needed

✓ PPT slides 36, 37



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



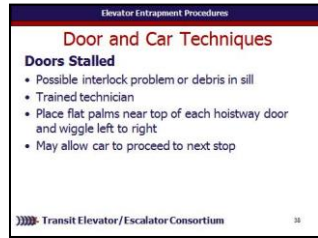
**REVIEW** slide

#### In your own words:

In some instances, an elevator may be stalled because door interlocking problem. It could be the result of debris being stuck in door sill. A trained technician should place the flat palms of both hands, very near the top of each hoistway door segment and wiggle the doors left to right and back and forth. This may alleviate the problem allowing the elevator car to continue to its next stop.

#### **Advance**

✓ PPT slide 38



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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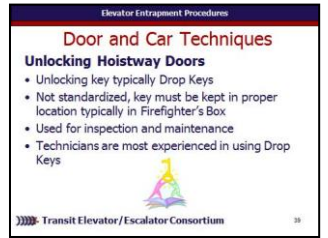
#### In your own words:

The elevator hoistway door can be unlocked with handheld unlocking key. These are not standardized across all elevator manufacturers so it is important that the correct key is kept in the proper location. These are kept in the Firefighter's Box with the fire service keys.

Typically these unlocking devices are drop keys and Elevator technicians use these keys to access the hoistway to do inspections and maintenance. Fire and rescue personnel use them as well but clearly the mechanic is the one with the most experience in using these devices!

#### **Advance**

✓ PPT slide 39



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

Again, it is important to remember that these keys are not standardized and each manufacturer develops its own set of keys.

#### **Advance**

The first step is to insert the drop key in the door release port usually located near the top of the door. Once the key is inserted, the drop part of the key then drops to disengage the lock mechanism on the back of the elevator door.

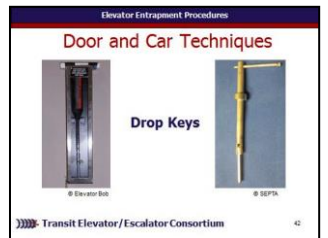
#### **Advance**

Here are two example of drop keys.

#### **Advance**

### Materials Needed

✓ PPT slides 40, 41, 42



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min      Time remaining: 270 min      This section: 60 min ( 33 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

**In your own words:**

Once the key is in the slot, pull the shaft of the key back until the drop pin hits the back of the elevator car door. Slowly rotate the shaft in a circular pattern.

**Advance**

This may need to be repeated with the elevator shaft inserted a little further each time until the drop pin engages against the lever to release the door. Have someone continually apply pressure to the door so that it will slide open when the locking lever is released. Do not let go of the elevator door as it will shut rapidly.

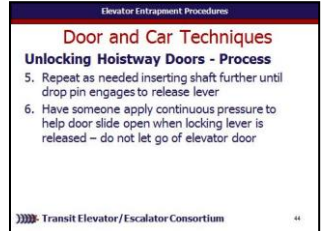
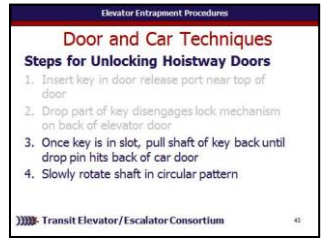
**Advance**

Here are is an example of inserting a drop key in a door release.

**Advance**

### Materials Needed

✓ PPT slides 43, 44, 45



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min      Time remaining: 270 min      This section: 60 min ( 33 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides



**Multimedia**

### Instructor's Notes

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### SAY

**In your own words:**

And here is a photo showing a drop key disengaging the lock on the back of the door.

*[Click on the link to a connect to a short video by AllHandsFire.com (Length = 1:13 minutes)*

*demonstrating how to unlock a door using a drop key.]*

**Advance**

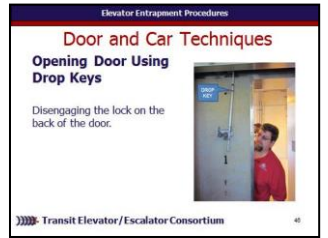
**Warning**

- Use barricades to block the hoistway opening.
- Once the hoistway door is open, check the location of the elevator cab before entering the shaft.

**Advance**

### Materials Needed

✓ PPT slides 46, 47



✓ Internet connection

# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

#### In your own words:

Some jurisdictions prohibit elevator doors to be equipped with holes such as door release ports. In these jurisdictions, elevator mechanics are trained to unlock the doors. The mechanic can open locked elevator doors using a set of simple tools (Figure 8) designed to slip over or under elevator doors to catch mechanisms that can release the doors. Note: These tools are not distributed by the elevator manufacturers but are made by BART elevator mechanics to quickly open doors for hoistway egress or in emergencies. Known as “Z keys” because of their shape, these tools are often formed by mechanics themselves using materials including wire, welding rods, or banding iron.

**Advance**

✓ PPT slide 48



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

Here are examples of various tools designed to unlock doors without door release ports.

#### **Advance**

Here is a Z key being used to open a door.

#### **Advance**

And here is the view from inside with the Z key disengaging the lock.

#### **Advance**

### Materials Needed

✓ PPT slides 49, 50, 51



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

#### In your own words:

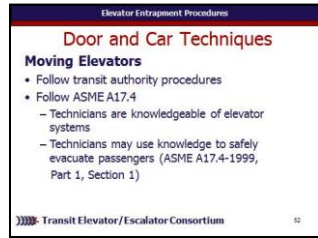
ASME A17.4 code is very clear regarding the role of the elevator technician in moving a stalled elevator:

Elevator personnel should also follow these procedures. However, **due to their knowledge of elevator systems they may utilize other procedures to safely evacuate passengers (e.g., move the car to a landing to allow egress through the elevator door).** Nevertheless the transit elevator mechanic must follow their transit property's procedures. If allowed, the elevator mechanic can attempt to move the car in the following ways.

ASME A17.4–1999, Part 1, Section 1.1

#### **Advance**

✓ PPT slide 52



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



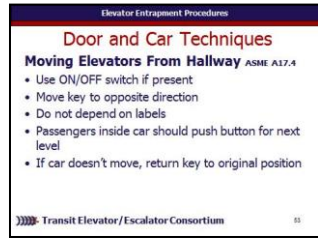
**REVIEW** slide

#### In your own words:

From the Hallway  
If the hallway is equipped with an elevator **ON/OFF switch**: Move key to opposite direction (do not depend on labels – some systems are wired differently); Have passengers inside car push the button on cab operating panel for the next floor level. If the cab does not move, return the key switch back to its original position.

**Advance**

✓ PPT slide 53



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

#### In your own words:

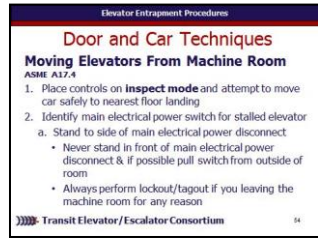
Moving an Elevator from the machine room according to ASMEA17.4:

Place the controls on **inspect mode** and attempt to move the car safely to the nearest flooring landing.

Identify the main electrical power disconnect switch for the stalled elevator. NEVER stand in front of **main electrical power disconnect** panel. Rather stand to side or, if possible, pull down on the main electrical power disconnect switch (down is normally the OFF position) from outside of room. (Always tagout and lock out disconnect switch if you are not staying in the machine room for any reason or time period.)

**Advance**

✓ PPT slide 54



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor's Notes

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### SAY

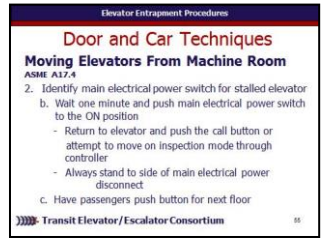
#### In your own words:

Wait for about a minute then push the main electrical power disconnect switch to the ON position (normally UP direction). Go back to the elevator and push the call button or attempt to move on inspection through the controller. Remember - Always stand to the side of main electrical power disconnect. Always lock out disconnect switch. Check your transit authority's lockout/tagout procedures and follow accordingly. Have passengers push cab operating panel button to next floor level.

#### Advance

### Materials Needed

✓ PPT slide 55



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

Caution: Do NOT turn off **auxiliary 110 volt** electrical power disconnect switches for the stalled elevator as they normally provide power for the elevator's lights and fan.

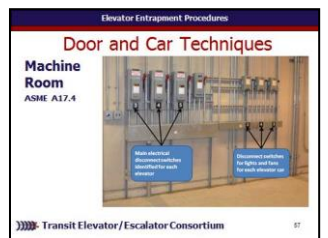
#### Advance

Here is a machine room in a transit station. You can see the mainline disconnect switches identified for each elevator and their corresponding disconnect switches for the lights and fans for each elevator car.

#### Advance

### Materials Needed

✓ PPT slides 56, 57



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor's Notes

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### SAY

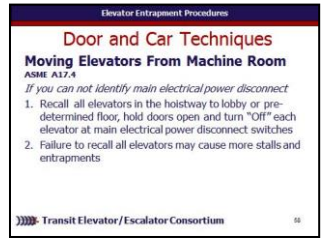
#### In your own words:

If you cannot identify the main electrical power disconnect switch for the affected elevator you should follow these steps: Recall all the elevators in that hoistway to the lobby or pre-determined floor. Hold the elevators doors open and turn "Off" each elevator at the main electrical power disconnect switches.  
Failure to recall all the elevators in the hoistway bank may cause elevator cabs to stall and more entrapments.

#### Advance

### Materials Needed

✓ PPT slide 58



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slides

### Instructor's Notes

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#### In your own words:

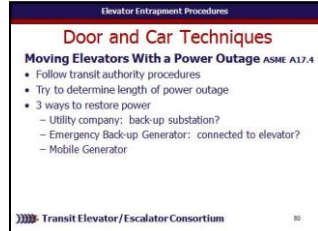
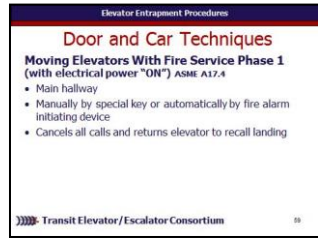
From the main hallway, activate **Fire Service Phase I** either manually by a special key or automatically by a fire alarm initiating device. An elevator can enter Phase I operation by a two-position key switch mounted near the hall call station. In Phase I mode, the elevator controller cancels all calls and returns the elevator to the recall landing.

#### Advance

If the elevator is stalled because of a power outage, the elevator technician should follow the transit agency's procedures for response. These procedures differ by jurisdiction and many times the policy is clearly stated that the Fire Department must be notified.

#### Do Not Advance

✓ PPT slides 59, 60





# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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#### In your own words:

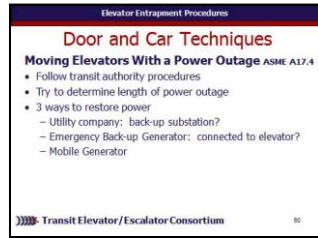
Once this has been taken care of, the elevator technician should find out how long before power is restored. There are three main ways that power can be restored to the faulty elevator:

**Utility Company:** Find out whether the utility company has back-up substations for this area and when the back-up substation should begin operating.

**Emergency Back-up Generator for the building:** Find out if the back-up generator supplies power to elevators. You may need the help of an electrician to assess if there is a problem with the switching of the back-up power. In some case a mobile back-up generator may have to be connected to the building or elevator incoming power supply connections.

**Advance**

✓ PPT slide 60



# Elevator – Entrapment Procedures

## Instructor's Guide





Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

DO	SAY	Materials Needed
 <b>REVIEW</b> slide  <b>Instructor's Notes</b> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<b>In your own words:</b> This is an example of a back-up generator used at a transit property. <b>Advance</b>	✓ PPT slide 61 

# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

**In your own words:**

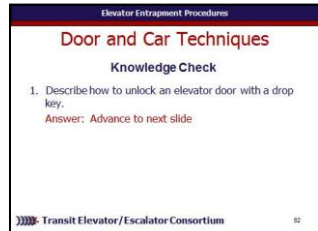
Lets see what we have learned so far:  
Describe how to unlock an elevator door with a drop key.

**Call on participants for answer**  
**Advance once given the correct answer**  
**Advance**

**Answer: Review the next slide**

**Advance**

✓ PPT slide 62, 63



### Instructor’s Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

**In your own words:**

Yes or No. Two things to remember when opening hoistway doors include first place barricades around the hoistway opening and next to check the location of the elevator cab before entering the shaft.

***Call on participants for answer***

***Advance once given the correct answer***

**Answer: Yes**

**Advance**

### Instructor's Notes

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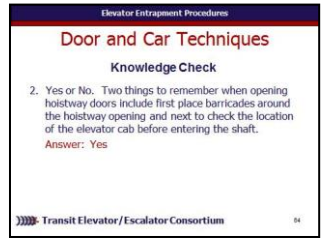
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✓ PPT slide 64



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

**In your own words:**

Yes or No. When moving an elevator from the machine room, never stand in front of main electrical power disconnect and always perform lockout/tagout before leaving the machine room for any reason.

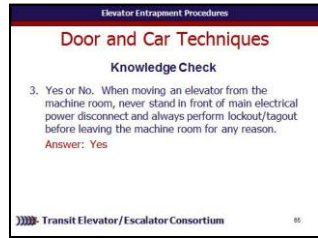
**Call on participants for answer**

**Advance once given the correct answer**

**Answer: Yes**

**Advance**

✓ PPT slide 65



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 270 min

This section: 60 min ( 33 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

### Instructor's Notes

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**In your own words:**

Ways to restore power to a trapped elevator during a power outage include

- a. A utility company back-up substation
- b. An emergency back-up generator
- c. Follow transit authority procedures
- d. A mobile generator

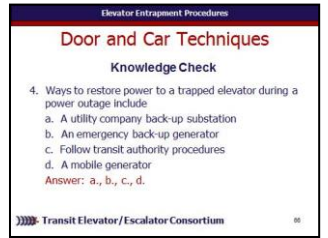
**Call on participants for answer**

**Advance once given the correct answer**

**Answer: a., b., c., d.**

**Advance**

✓ PPT slide 66



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor’s Notes

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### SAY

#### In your own words:

Next, we want to look at entrapment procedures according ASME A17.4.

#### **Advance**

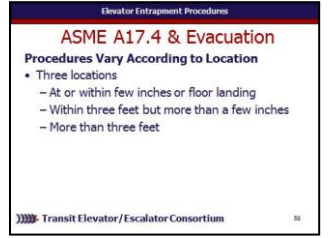
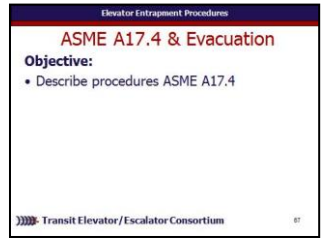
Procedures for evacuating passengers vary by the location of the stalled elevator to the floor landing. The elevator may be stuck in one of the following three locations:

- At or near the floor landing (within a few inches of the landing floor), or
- Within three feet (36 inches maximum) but more than a few inches, or
- More than three feet (36 inches or greater).

#### **Advance**

### Materials Needed

✓ PPT slides 67, 68



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

Before proceeding with the recommended evacuation guidelines, fire and rescue personnel with help from the elevator mechanic should:

Make sure power is "OFF"

Place mainline electrical power disconnect switch in the "OFF" position located in the elevator machine room. Lock out and tag out the disconnect switch.

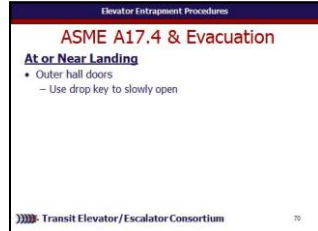
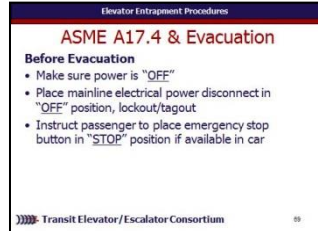
Have a passenger place the emergency stop button in the "STOP" position if available on the cab control panel.

#### Advance

Normally the elevator cab doors can be opened by hand with the drop key. Use the drop key to open the outer hall doors by lifting door unlocking paddle/bolt/linkage. Slowly open the hall doors to the open position with the drop key. **Advance**

### Materials Needed

✓ PPT slides 69, 70





# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min      Time remaining: 210 min      This section: 120 min ( 53 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor's Notes

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### SAY

**In your own words:**

Again, here is a photo of a drop key and a photo of someone using a drop key to open the outer hall doors for an entrapment at or near the landing.

**Advance**

### Materials Needed

✓ PPT slide 71



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor’s Notes

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**In your own words:**

#### Cab doors

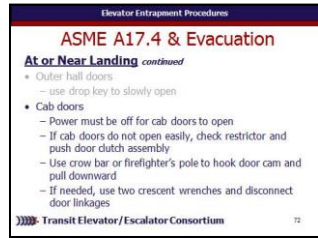
If the cab doors do not open easily, check the door restrictor to see if it is engaged to restrict the door from opening. The **restrictor** should allow the doors to open by hand if the elevator is at or near floor level. Power must be “OFF” to open cab doors by hand. Push on the **door clutch assembly** and pull the doors open.

You may be able to use a crow bar or a firefighter’s pole to hook the door cam or the dogleg of the door linkage and pull downward to assist the doors to move. Note that doors will not open if power is “ON”

If necessary, use two crescent wrenches and disconnect the door linkage the “dogleg” between the crutch link and drive arm, and pull doors open.

**Do Not Advance**

✓ PPT slide 72



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min      Time remaining: 210 min      This section: 120 min ( 53 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

**In your own words:**

In a critical situation where a passenger must be evacuated immediately, cut the door linkage at the dogleg with a hack saw or power saw or with assistance from firefighter who is familiar with the “Jaws of Life” hydraulic cutting tool.

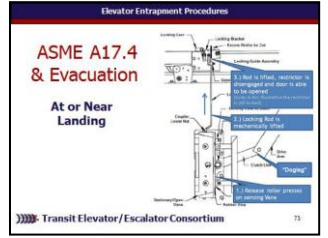
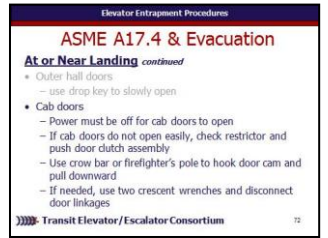
**Advance**

Here is a diagram. 1<sup>st</sup>, release the roller presses on sensing vane. 2<sup>nd</sup>, the locking rod is mechanically lifted, and third, the restrictor is disengaged and the door is able to be opened.

**Advance**

### Materials Needed

✓ PPT slides 72, 73



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min      Time remaining: 210 min      This section: 120 min ( 53 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slides

### Instructor's Notes

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**In your own words:**

Secure doors so they will not close. Use drop key or screwdriver to wedge bottom of door open.

Before allowing anyone out, check that the emergency stop button is in the "STOP" position.

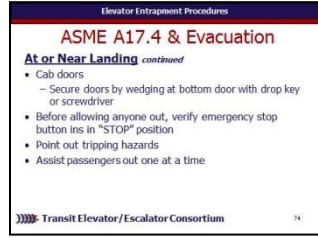
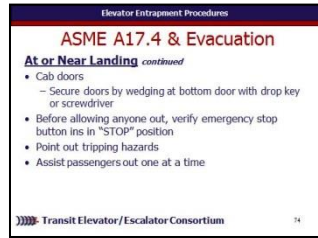
Point out all tripping hazards and assist the passengers out of the elevator one at a time.

**Advance**

Go to the floor nearest the stalled elevator. Normally the elevator cab door(s) can be opened by hand with the drop key. Use the drop key to open the outer hall doors by lifting door unlocking paddle/bolt/linkage. Slowly open the hall doors to the open position with the drop key.

**Do Not Advance**

✓ PPT slides 74, 75



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

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### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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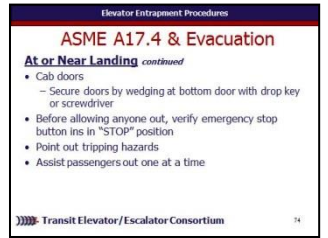
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#### In your own words:

Use the drop key to open the outer hall doors by lifting door unlocking paddle, bolt, or linkage. Slowly open the hall doors to the open position. Stop approximately two inches from the door frame on a passenger elevator. The doors are held in place on the door track with door stops – the door stops may not be properly adjusted. If the door stops are not in proper place, the doors may come off the tracks which will result in a greater problem. If doors fail to open, check the door restrictor. It may be engaged to restrict the door from opening. The restrictor should allow the door to open by hand if the elevator is at or near floor level. Power must be “OFF” to open cab door by hand. Push on the door clutch assembly and pull the cab door open.

**Advance**

✓ PPT slide 75



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor’s Notes

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### SAY

#### In your own words:

Secure door so they will not close. If necessary use the drop key or screwdriver to wedge bottom of door open.

Before allowing anyone off the elevator, enter the elevator cab and check that the emergency stop button is in the “STOP” position.

Use a step ladder or foot stool to assist passenger out of elevator.

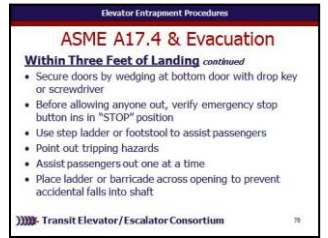
Point out all tripping hazards and assist the passengers out of the elevator one at a time.

Place a ladder or barricade across any opening to prevent accidental falls into the elevator shaft.

#### **Advance**

### Materials Needed

✓ PPT slide 76



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

Here is a photo from ASME A17.4 of guarding the hoistway below the car.

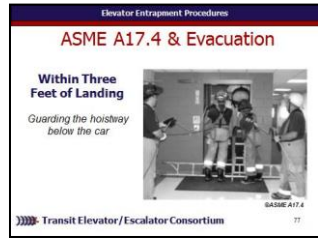
#### Advance

If the elevator hall doors are open but cab doors do not open, check the door restrictor. You may be able to use a crow bar or firefighter's pole to hook the door cam or the dogleg of the door linkage and pull downward to assist in moving the doors. Note: Doors will not move if power is "ON."

If necessary, use two crescent wrenches and disconnect the door linkage the "dogleg" between the crutch link and drive arm, and pull doors open. In a critical situation where a passenger must be evacuated immediately, cut the door linkage at the dogleg with a hack saw or power saw or with assistance from firefighter who is familiar with the "Jaws of Life" hydraulic cutting tool. **Advance**

### Materials Needed

✓ PPT slides 77, 78



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor’s Notes

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#### In your own words:

Before allowing anyone out, check that the emergency stop button is in the “STOP” position.

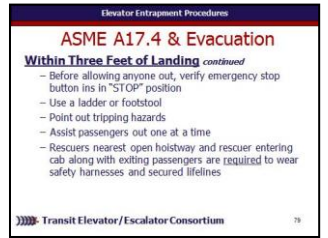
A ladder or step ladder or footstool should be used for safe entry by rescuers and removal of passengers from the cab.

Point out all tripping hazards and assist the passengers out of the elevator one passenger at a time.

ASME A17.4 Manual requires that the rescuers nearest the open hoistway and the rescuer entering the cab as well as exiting passengers wear **safety harnesses** and **secured lifelines**.

**Advance**

✓ PPT slide 79





# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min      Time remaining: 210 min      This section: 120 min ( 53 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

**In your own words:**

Here is a photo of a safety harnesses on a mannequin.

**Advance**

The recommended procedures for evacuating passengers in a stalled elevator that is more than three feet from the floor landing are either through the top or side emergency exits.

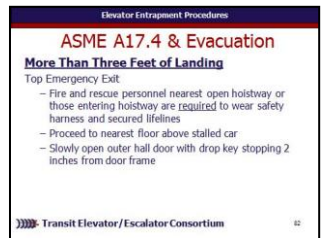
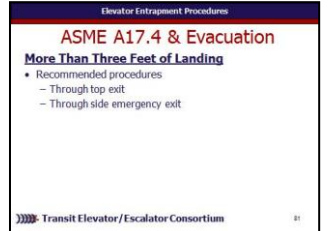
**Advance**

Evacuation via Top Emergency Exit  
 If the elevator is more than three feet from the nearest floor landing, ASME 17.4 recommends that passengers should be evacuated through emergency exits on top of the elevator.

**Do Not Advance**

### Materials Needed

✓ PPT slides 80, 81, 82



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor's Notes

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### SAY

#### In your own words:

Removing passengers through the doorway would incur a higher risk of injuries. ASME 17.4 also requires that the fire and rescue personnel who are nearest the open hoistway and those entering the hoistway as well as exiting passengers wear secured lifelines and harnesses.

Travel to the nearest floor above the stalled elevator cab and use the drop key to open door, or force the door open

Use the drop key to open the outer hall doors by lifting door unlocking paddle/bolt/linkage

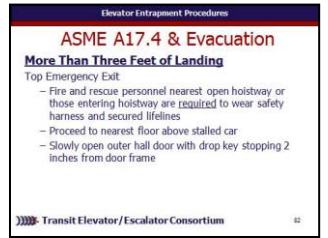
Slowly open the hall doors to the open position

Stop approximately 2 inches from the door frame.

**Advance**

### Materials Needed

✓ PPT slide 82



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

If the hall door(s) must be forced open:  
 Determine type of doors whether they are two speed side slide door, center-opening two speed slide doors, swing door, pull/slide door, or bi-parting door. Use the **irons** which are terms firefighters use to call the flat head axe, crow bar or **halligan tool** they use in rescue operations.

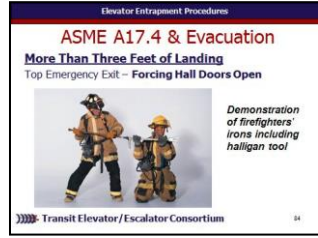
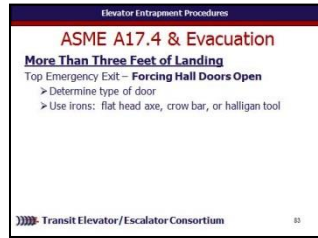
#### Advance

Here is a demonstration of firefighters' irons including a halligan tool.

#### Advance

### Materials Needed

✓ PPT slides 83, 84



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slides

### Instructor's Notes

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#### In your own words:

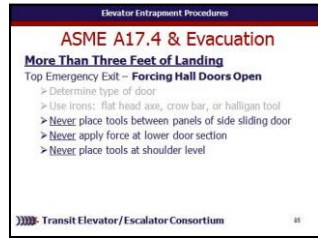
Because all the locking devices are on the upper section of the door, never place tools between the panels of a side sliding door; this will cause more problems. **Never apply force at lower section of doors and never place tools lower than shoulder level.** Forcing the doors open from the lower end will result in the hall doors.

#### **Advance**

Again, never place tools lower than rescuers shoulders.

#### **Advance**

✓ PPT slides 85, 86



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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#### In your own words:

On side sliding door place the Halligan tool or crow bar so it will force the door to move in its normal opening direction

Place the Halligan tool or crow bar in the upper most corner of the inner panel normally it is the one panel which move first.

Place a 2x4 wood piece or wooden axe handle between the Halligan tool or crow bar and door frame to limit damage and for the leverage. If necessary use a hammer or the flat side of the axe head to drive the Halligan tool or crow bar between the door and door frame.

Slowly open the hall doors to the open position.

**Advance**

✓ PPT slide 87



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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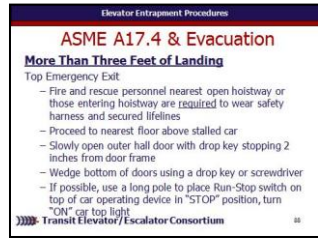
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#### In your own words:

Force the doors open by hand.  
 Stop approximately two inches from the door frame.  
 Secure hall doors so they will not close.  
 Wedge the bottom of the doors open using a screwdriver or drop keys.  
 Looking down at the elevator shaft at the top of the stalled elevator car, if possible the rescuer should use a long pole, or even the handle of a mop, to place the Run-Stop toggle switch on the **top of car operating device** in the "STOP" position and turn "ON" car top light with the Light toggle switch.

#### Advance

✓ PPT slide 88



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

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### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

Here is a view looking down at the elevator shaft at the top of the stalled elevator car. Again, if possible the rescuer should use a long pole, or even the handle of a mop, to place the Run-Stop toggle switch in the "STOP" position and turn "ON" car top light with the Light toggle switch.

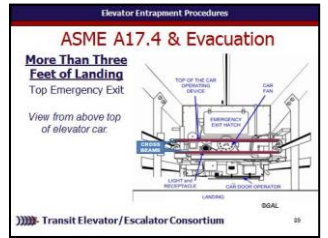
#### Advance

Here is a photo of a top of car operating device from a transit station.

#### Advance

### Materials Needed

✓ PPT slides 89, 90



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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#### In your own words:

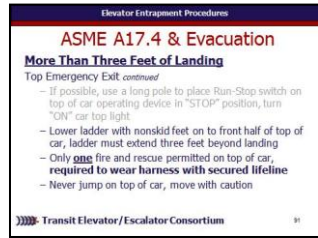
A ladder with nonskid feet should be slowly and carefully lowered onto the front half of the top of the elevator. The ladder must of sufficient length to extend at least three feet beyond the landing floor.

Only **one** fire and rescue person is permitted on top of elevator car at a time and the descending fire and rescue person **must wear a harness with a secured lifeline.**

Never jump on top of the elevator. Move with caution.

#### Advance

✓ PPT slide 91





# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

#### In your own words:

Once on top of cab the fire and rescue person must locate the Run-Stop toggle switch on the **top of car operating device** and place it in the “STOP” position and turn “ON” car top light with the Light toggle switch.

Locate emergency exit which is usually located towards the back of the car.

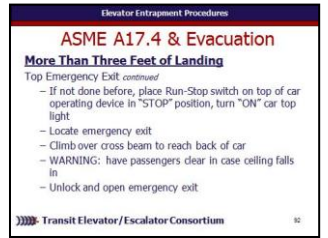
Emergency exits come in all shapes but they must be 400 square inches and no shorter than 16” on any one side. Standard sizes are 20”x20” and 16” x 24”.

Climb over the cross beam to get to the back of the cab.

Unlock the emergency exit by turning the unlocking devices which may vary from wing nuts, to slide bolt latches, to standard door tumbler locks.

**Do Not Advance**

✓ PPT slide 92



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min      Time remaining: 210 min      This section: 120 min ( 53 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

**In your own words:**

**WARNING:** Have the passengers stand clear in case the false ceiling falls inward due to movement of the top emergency exit door.

Open the emergency exit hatch door which may be hinged or attached with a chain. If hatch cover is removable, place it in a safe spot such as under the ladder.

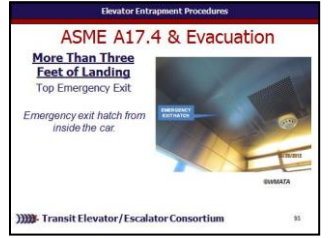
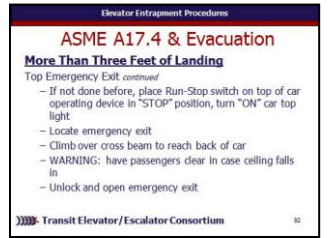
**Advance**

Here is a view of an emergency exit hatch from inside the car.

**Advance**

### Materials Needed

✓ PPT slides 92, 93



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

Check for attached light cords, which may be part of a light fixture attached to the false ceiling. Unplug cord from electrical box. Remove any light diffuser or false ceiling tiles and lower a collapsible ladder or folding ladder into the cab very slowly. Fire Departments use special collapsible ladders for elevator top exit rescues .

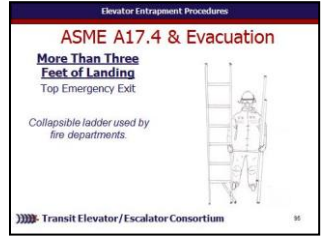
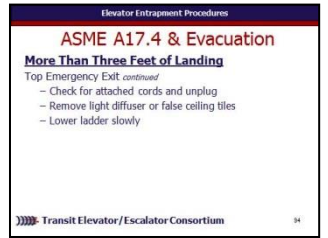
#### **Advance**

Here is a collapsible ladder used by fire departments.

#### **Advance**

### Materials Needed

✓ PPT slides 94, 95



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min      Time remaining: 210 min      This section: 120 min ( 53 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor’s Notes

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### SAY

**In your own words:**

Place the second ladder in the safest position possible into the cab and at the entrance of the emergency exit hatch door.

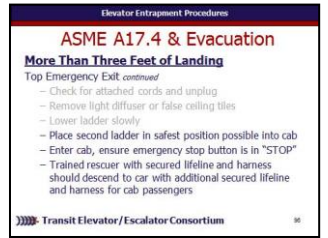
Enter the cab and ensure the emergency stop button on the operating panel (if equipped) is in “STOP” position.

A trained rescuer with a secured lifeline and harness should descend on to the top of the car with an additional secured lifeline and harness that will be used for each passenger to the cab. The passengers must leave the cab one at a time wearing the safety harness and secured lifelines.

**Advance**

### Materials Needed

✓ PPT slide 96



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor’s Notes

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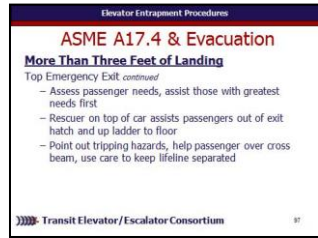
#### In your own words:

Inside the cab, assess each passenger’s needs. Those individuals needing the most assistance are helped first up the ladder. The rescuer on top of the car assists the passengers out the emergency exit hatch and up the ladder to floor.

Point out tripping hazards and the edges of the cab making sure that passengers avoid touching wires. Help passengers over the cross beams as necessary and assist the passengers and use care to keep lifelines separated.

#### **Advance**

✓ PPT slide 97



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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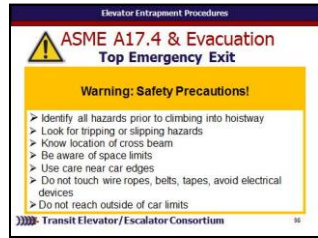
#### In your own words:

Remember

- Identify all hazards prior to climbing into hoistway
- Look for tripping or slipping hazards
- Know location of cross beam
- Be aware of space limits
- Use care near car edges
- Do not touch wire ropes, belts, tapes, avoid electrical devices
- Do not reach outside of car limits

#### Advance

✓ PPT slide 98



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor’s Notes

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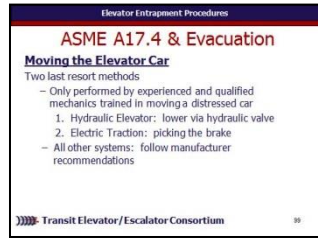
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#### In your own words:

If the elevator car fails to move after all aforementioned procedures have been exhausted, there are two “last resort” methods that **should only be performed by experienced and qualified elevator mechanics who have been trained in moving a distressed elevator car**: one method is for use in a hydraulic elevator system where the car is lowered via the hydraulic valve; and the other method involves picking the brakes of a traction elevator system. For other elevator systems, such as rack-and-pinion, follow the manufacturer s’ recommendations.

#### **Advance**

✓ PPT slide 99



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min      Time remaining: 210 min      This section: 120 min ( 53 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slides

**In your own words:**

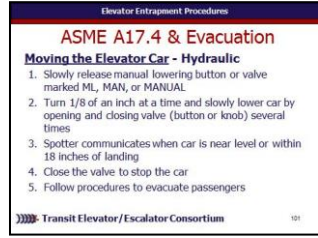
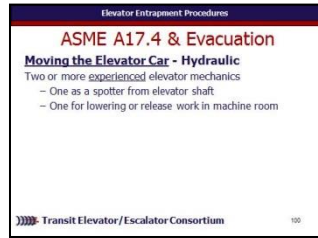
Two experienced elevator mechanics are needed: one individual does the lower/release work in the machine room and the other individual acts as a spotter from the elevator shaft.

**Advance**

Slowly lower or release the manual lowering button marked ML, MAN, or MANUAL. Note the manual lowering device may be a button or a hand turn shut off valve depending on model. It may be located on the Control valve or anywhere in the hydraulic supply side of the hydraulic pumping system. Most often the manual lowering device is painted red.

**Do Not Advance**

✓ PPT slides 100, 101



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor's Notes

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### SAY

#### In your own words:

Remember that hydraulic elevators go down when the emergency hydraulic valve is opened.

Turn the bleeder valve handle slowly (in one-eighth of a turn at a time). Slowly lower the car by opening and closing the handle several times to ensure control of the speed of the car and stops. Avoid hard stops.

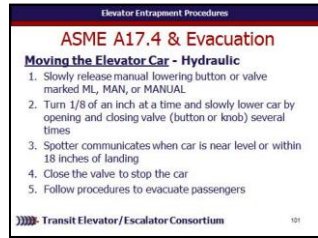
The spotter must notify the other mechanic controlling the valve when the car is level with the floor landing or within 18 inches.

Close the valve handle. This will stop the car. Follow the procedures for evacuating passengers when the car is level or within 18 in of the floor landing.

#### Advance

### Materials Needed

✓ PPT slide 101



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

Here is a photo of a manual lowering button and another photo showing a manual lowering knob.

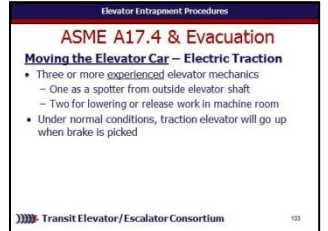
#### Advance

For a traction elevator: Three or more **experienced** elevator mechanics are needed: two individuals do the lowering or release work in the machine room and the other individual acts as a spotter from outside the elevator shaft. Under normal conditions, traction elevators will go up when the brake is picked.

#### Advance

### Materials Needed

✓ PPT slides 102, 103



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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#### In your own words:

Inform your supervisor and Fire Department you are picking the brake and make sure everyone is in a safe position.

Check the conditions of the elevator and wire ropes.

Check if the governor's safeties (normally below the car) are set; if they are set then the car must be moved upward.

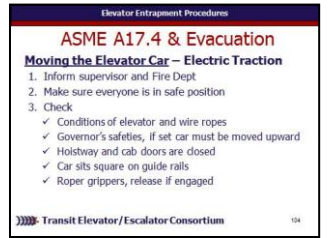
Check that all the doors are closed on the cab and hoistway.

Check that the elevator car sits square on guide rails.

Check whether or not the rope grippers are engaged. If they are engaged, they need to be released prior to moving the elevator.

#### **Advance**

✓ PPT slide 104



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

#### In your own words:

Remember to take your time and slowly and carefully open the brake tension in 1/64 of an inch or less at a time. Move the car in short runs so you have it under control. Avoid hard stops.

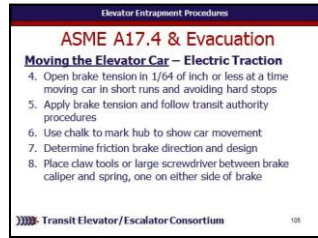
Slowly lower the car by opening and applying brake tension several times to ensure control of the speed of the car travel and stops.

Follow these recommendations or your authority's procedures when picking the brakes of a traction elevator.

Use chalk to mark the hub to show movement of the elevator car.

**Do Not Advance**

✓ PPT slide 105



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slides

### Instructor's Notes

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#### In your own words:

Locate the friction brake and determine the direction the brake moves (in or out) and the design of the brake. Look for locations on the housing, where you can place or wedge the claw tools or large screwdrivers. The friction brake will be to one side of the shaft.

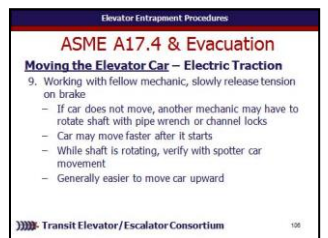
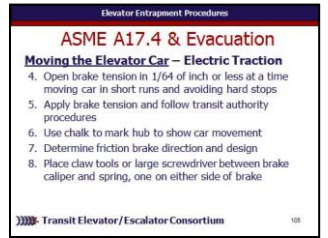
Place the claw tools or large screwdrivers between brake caliper and the spring, one on either side of the brake.

#### **Advance**

Working in unison with fellow mechanic on each side of the brake, very slowly release the tension on the brake. If the car does not move – another mechanic may have to rotate the shaft with a pipe wrench or channel locks.

#### **Do Not Advance**

✓ PPT slides 105, 106



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO



**REVIEW** slide

### Instructor’s Notes

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### SAY

#### In your own words:

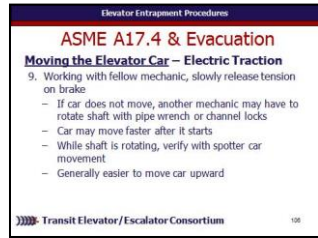
Be aware the car may move faster after it starts to move (depending on capacity, conditions and direction of travel). While the shaft is rotating, verify with the spotter stationed by the stalled elevator car that the car is moving in the desired direction (up or down). If not, apply brakes and very slowly release tension, then rotate the shaft in the opposite direction or change the desired floor that the car is to be moved to.

Because of counterweights and the number of passengers in the car, the car may slowly begin to move upward. This is easily controlled by pressure exerted on the friction brake. It is generally easier to move the car upward because of the counterweights.

#### Advance

### Materials Needed

✓ PPT slide 106



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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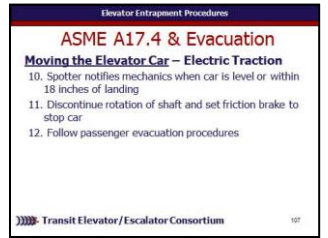
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#### In your own words:

Working in unison with fellow mechanic on each side of the brake, very slowly release the tension on the brake. If the car does not move – another mechanic may have to rotate the shaft with a pipe wrench or channel locks. Be aware the car may move faster after it starts to move (depending on capacity, conditions and direction of travel). While the shaft is rotating, verify with the spotter stationed by the stalled elevator car that the car is moving in the desired direction (up or down). If not, apply brakes and very slowly release tension, then rotate the shaft in the opposite direction or change the desired floor that the car is to be moved to.

**Do Not Advance**

✓ PPT slide 107



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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#### In your own words:

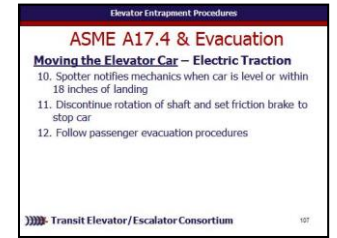
Because of counterweights and the number of passengers in the car, the car may slowly begin to move upward. This is easily controlled by pressure exerted on the friction brake. It is generally easier to move the car upward because of the counterweights.

The spotter must notify the mechanics working with the brakes when the car is level with or within 18 inches of the floor landing. Discontinue rotation of the shaft and set the friction brake by releasing pressure. This will stop the car.

Follow the procedures for evacuating passengers when the car is level or within 18 in of the floor landing.

#### Advance

✓ PPT slide 107





# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

#### In your own words:

Remember: It is important to always get your supervisor's approval before using the hydraulic manual lowering procedure or attempting to pick the brake on a traction elevator.

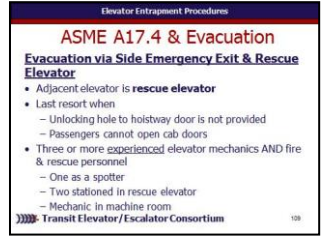
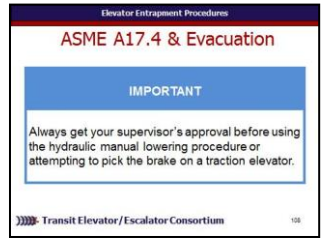
#### Advance

If the stalled elevator shares a hoistway with an adjacent elevator, one method of evacuating passengers is by using the adjacent elevator as the **rescue elevator**. If unlocking hole to the hoistway door is not provided and the passengers cannot open the cab doors and an adjacent elevator is in the hoistway, the following procedure can be used as a last resort attempt in an emergency.

#### Do Not Advance

### Materials Needed

✓ PPT slides 108, 109



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slides

### Instructor’s Notes

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#### In your own words:

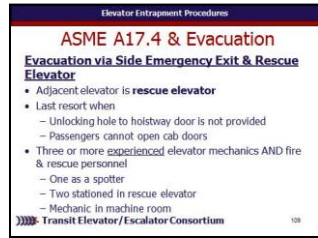
Three or more experienced elevator mechanics AND fire and rescue personnel are needed: One works as spotter; two are stationed in the rescue elevator – one operates the rescue car and one is available to enter the stalled car; and the mechanic in the machine room.

#### Advance

A pole may be used to manually open the stalled elevator hall doors. Place pole and scaffolding planks and other rescue equipment in rescue car.

Call the rescue elevator to the rescuer’s floor. The rescue elevator must be taken to the floor nearest the stalled elevator. Align the rescue elevator as closest as possible to the stalled elevator. Work with the mechanic in the machine room and spotter to communicate the location of the rescue elevator. **Advance**

✓ PPT slides 109, 110



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min      Time remaining: 210 min      This section: 120 min ( 53 slides)      Section start time: \_\_\_\_\_      Section End Time: \_\_\_\_\_

### DO



**REVIEW** slides

### Instructor's Notes

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### SAY

**In your own words:**

The mechanic in the machine room should place main electrical power disconnect switch in the "OFF" position after the doors have opened on the rescue elevator car. Extend a pole through the opening between the car and open hoistway doors of the rescue elevator.

Use extreme care not to extend the pole into the hoistway of any other elevator or counter weights in use. Do not drop the pole.

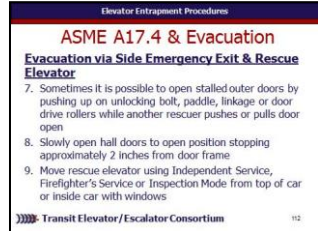
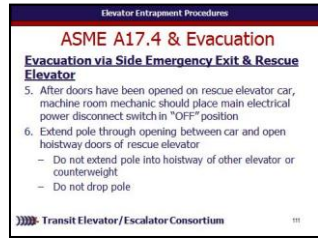
**Advance**

It is sometimes possible to open the stalled elevator outer doors by pushing upward on the unlocking bolt, paddle, linkage or the door drive rollers. Another rescuer must push or pull the door open while the unlocking device is in the upward position.

**Do Not Advance**

### Materials Needed

✓ PPT slides 111, 112



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



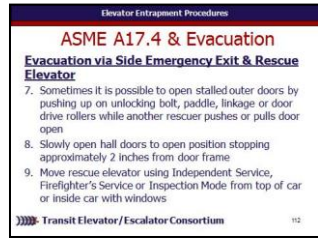
**REVIEW** slide

#### In your own words:

Slowly open the hall doors to the open position  
 Stop approximately two inches from the door frame  
 The rescue elevator is to be moved using Independent Service, Firefighter’s Service or on Inspection Mode from top of car or inside the car with windows.

#### **Advance**

✓ PPT slide 112



### Instructor’s Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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#### In your own words:

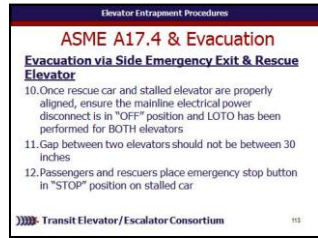
Once the rescue car and the stalled elevator are properly aligned, ensure the mainline electrical power disconnect switches are in the "OFF" position for both elevators. Lock out and tag out both electrical power disconnect switches.

The gap between the two elevators should not be more than 30 inches.

Have passengers and rescuers placed the emergency stop button in the "Stop" position (if equipped on the cab operating panel) on the stalled elevator.

#### Advance

✓ PPT slide 113



# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides)

Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

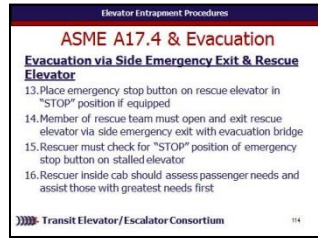
#### In your own words:

The emergency Stop button on the rescue elevator should be placed in the “STOP” position if equipped.

A member of the rescue team must open and exit the rescue elevator via the side emergency exit. An evacuation bridge shall be placed so the rescuer can enter the stalled elevator through the side emergency exit. The rescuer must check the emergency Stop button on the stalled elevator should be placed in the “STOP” position if equipped. The rescuer inside the cab should assess passengers’ needs and assist those passengers needing help first.

#### Advance

✓ PPT slide 114



### Instructor’s Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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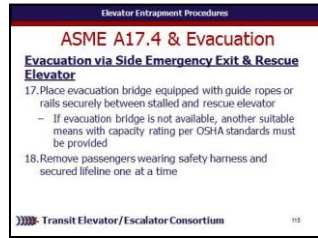
#### In your own words:

An evacuation bridge equipped with guide ropes if available or rails (i.e. firefighters' poles) should be placed securely between the stalled and rescue elevators. If an evacuation bridge is not available, other suitable means must be provided. All wooden board should be in excellent condition with capacity rating per OSHA standards for scaffolding.

Passengers must be removed one at a time each wearing a safety harness and a secured lifeline.

#### Advance

✓ PPT slide 115



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**REVIEW** slide

### Instructor's Notes

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#### In your own words:

Once all the passengers are transferred to the rescue cab:

Check the emergency side exit on the rescue car is properly closed.

Look for interlock (safety switches) to ensure they are engaged.

Once the passengers are inside the rescue elevator and rescue teams indicate that everything is ready:

Store away the evacuation bridge

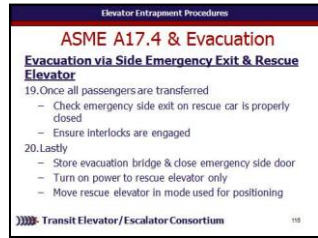
Close the side emergency door

Turn on the power via the main electrical disconnect to the rescue elevator only.

Move the rescue elevator in the mode which was used to position it whether it was independent service, Firefighter's Service, or inspection mode.

#### Advance

✓ PPT slide 116





# Elevator – Entrapment Procedures

## Instructor’s Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

### Instructor’s Notes

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#### In your own words:

Lets see what we have learned so far:  
Before proceeding with recommended evacuation guidelines, the elevator mechanic should (check all that apply)

- a. Make sure power is “OFF”
- b. Place mainline electrical power disconnect is “OFF”
- c. Lockout/tagout disconnect switch
- d. If available, have passenger place emergency stop button in “STOP” position

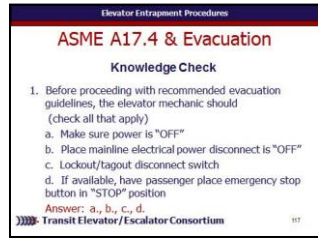
**Call on participants for answer**

**Advance once given the correct answer**

**Answer: a., b., c., d.**

**Advance**

✓ PPT slide 117



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

### Instructor's Notes

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**In your own words:**

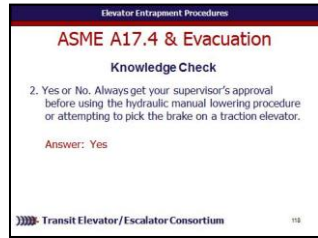
Yes or No. Always get your supervisor's approval before using the hydraulic manual lowering procedure or attempting to pick the brake on a traction elevator

**Call on participants for answer**  
**Advance once given the correct answer**

**Answer: Yes**

**Advance**

✓ PPT slide 118



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 210 min

This section: 120 min ( 53 slides) Section start time: \_\_\_\_\_ Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



**ASK**

### Instructor's Notes

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**In your own words:**

Three or more experienced mechanics along with fire and rescue personnel are required for \_\_\_\_\_ evacuation.

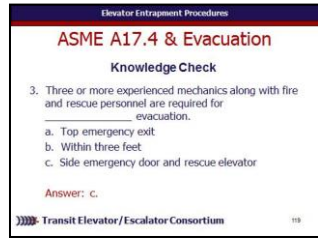
- a. Top emergency exit
- b. Within three feet
- c. Side emergency door and rescue elevator

**Call on participants for answer**  
**Advance once given the correct answer**

**Answer: c.**

**Advance**

✓ PPT slide 119



# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 90 min

This section: 60 min

Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



ASK



CLASSROOM  
ACTIVITY

In your own words:

*[At instructor's discretion, take time to visit the field and look for examples of entrapment procedures for their specific transit authority.]  
Advance.*

✓ PPT slide 120



### Instructor's Notes

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# Elevator – Entrapment Procedures

## Instructor's Guide



Module Length: 360 min

Time remaining: 30 min

This section: 30 min ( 3 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

### DO

### SAY

### Materials Needed



#### CLASSROOM ACTIVITY

#### Instructor's Notes

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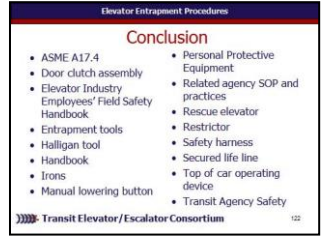
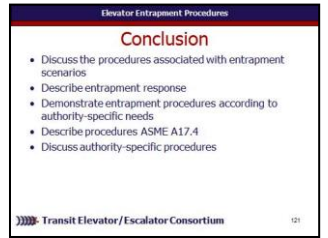
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**In your own words:**  
*[Read slide.*  
**For each objective, briefly review what was learned in this module or ask participants to share what they have learned for each learning objective and briefly discuss as a class.]**  
**Advance.**

Lets take a look at some of the key words we have defined as moved through this module.  
**Read slide. Discuss definitions as a group.**  
**Advance.**

**Read slide. Discuss definitions as a group.**  
**Advance.**

✓ PPT slides 121, 122



# Elevator – Entrapment Procedures

## Instructor's Guide





Module Length: 360 min

Time remaining: 30 min

This section: 30 min ( 3 slides) Section start time: \_\_\_\_\_

Section End Time: \_\_\_\_\_

DO	SAY	Materials Needed
 <p><b>CLASSROOM ACTIVITY</b></p>  <p><b>INDIVIDUAL ACTIVITY</b></p> <p><b>Instructor's Notes</b></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p><b>In your own words:</b></p> <p><i>Administer quizzes.</i></p>	<ul style="list-style-type: none"><li>✓ PPT slides 123</li><li>✓ Quizzes</li><li>✓ Pencils</li></ul> 