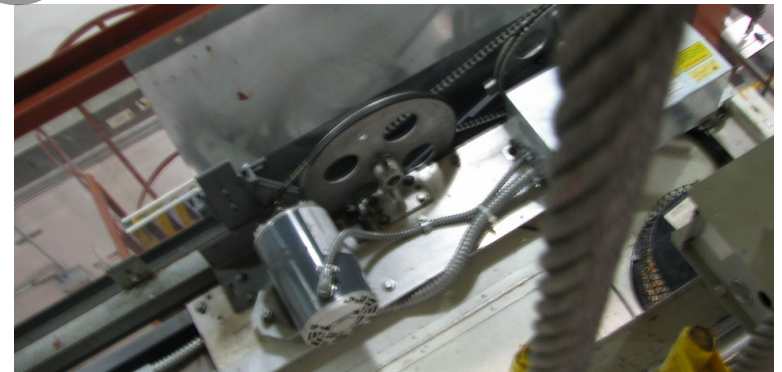
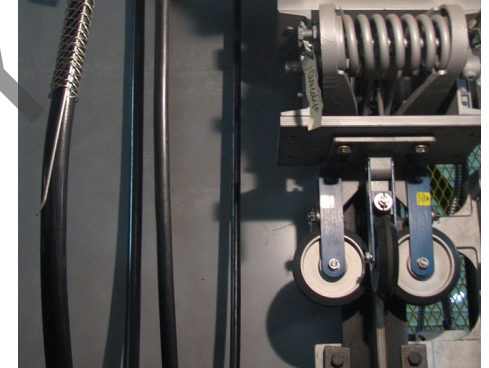


Instructor Guide



213: Elevator: Principles of Operation Module 4: Door Systems



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PREVIEW ONLY

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Icons Used In This Guide



REVIEW slides



ASK



CLASSROOM ACTIVITY



SMALL GROUP ACTIVITY



INDIVIDUAL ACTIVITY



WRITE



Multimedia



REFER participants to

Agenda

Topic #	Topic Title	Duration
1	Overview	10 minutes
2	Basic Operation	20 minutes
3	Major Components	10 minutes
4	Door Configurations	10 Minutes
5	Field Trip	30 Minutes
6	Summary	10 Minutes
	Total Time:	90 Minutes

10 Minutes

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Overview

Purpose The purpose of this module is to:

- Provide the participant with a general knowledge and understanding of the operation of elevator doors. The key concepts discussed will aid the trainee in their future applications of elevator concepts and terminology.

Objectives

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

- Define associated terminology
- Describe the basic operation of elevator doors
- Identify associated components
- Be able to differentiate between a right and left handed door
- Identify different door configurations
- Identify different types of door systems

Materials

Mandatory

Make sure you have the following

- Computer
- Projector
- Internet Connection
- Quizzes
- Pencils, Paper
- GAL CD
- Elevator 101, 2nd Edition

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

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Module Length: 90 min Time remaining: 90 min This section: 10 min (6 slides) Section start time: _____ Section End Time: _____

DO	SAY	Materials Needed
<div data-bbox="19 482 125 578"></div> <div data-bbox="154 504 614 542"> REVIEW module objectives </div> <div data-bbox="19 792 444 835"> Instructor's Notes </div> <div data-bbox="19 892 614 1242"> <hr/><hr/><hr/><hr/><hr/> </div>	<div data-bbox="676 425 1023 464"> In your own words: </div> <div data-bbox="676 492 1400 614"> <p>Today we will look at the principles of operation for door systems. In doing so, we will...</p> </div> <div data-bbox="676 621 1168 664"> <p>Advance for each objective.</p> </div> <div data-bbox="676 714 1178 749"> <p>Define associated terminology</p> </div> <div data-bbox="676 799 1333 878"> <p>Describe the basic operation of elevator doors.</p> </div> <div data-bbox="676 935 1197 971"> <p>Identify associated components</p> </div> <div data-bbox="676 1021 1265 1063"> <p>Identify different door configurations</p> </div> <div data-bbox="676 1113 1391 1192"> <p>Be able to differentiate between a right and left handed door</p> </div> <div data-bbox="676 1249 1313 1285"> <p>Identify different types of door systems</p> </div> <div data-bbox="676 1292 840 1328"> <p>Advance.</p> </div>	<div data-bbox="1497 471 1738 506"> ✓ PPT slides 3 </div> <div data-bbox="1535 521 1854 749"> </div>

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Module Length: 90 min Time remaining: 90 min This section: 10 min (6 slides) Section start time: _____ Section End Time: _____

DO	SAY	Materials Needed
<div data-bbox="19 478 125 578"></div> <div data-bbox="154 499 479 542"> REVIEW key terms </div> <div data-bbox="19 785 444 835"> Instructor's Notes </div> <div data-bbox="19 892 608 1242"> <hr/><hr/><hr/><hr/><hr/> </div>	<div data-bbox="676 421 1023 464"> In your own words: </div> <div data-bbox="676 485 1381 614"> <p>Lets take a look at some of the key words we will be defining as move through this module.</p> </div> <div data-bbox="676 664 1391 835"> <p>Automatic door re-opening device, Car door, Clutches , Daylite, Door closers , Door hanger assembly, Door hanger track Advance.</p> </div> <div data-bbox="676 885 1410 1056"> <p>Door panel, Door restrictor, Door sill , Floor level , Gate switch , Gib , and Hoistway doors Advance.</p> </div>	<div data-bbox="1526 464 1758 506"> ✓PPT slide 4 </div> <div data-bbox="1535 514 1854 749"> </div>

Elevator – Door Systems

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Module Length: 90 min Time remaining: 80 min This section: 20 min (14 slides) Section start time: _____ Section End Time: _____

DO	SAY	Materials Needed
<div data-bbox="34 464 144 564" data-label="Image"> </div> <div data-bbox="170 492 428 528" data-label="Text"> <p>REVIEW slides</p> </div> <div data-bbox="28 792 444 835" data-label="Section-Header"> <h3>Instructor's Notes</h3> </div> <div data-bbox="28 892 608 1242" data-label="Form"> <hr/><hr/><hr/><hr/><hr/> </div>	<div data-bbox="676 421 1023 464" data-label="Section-Header"> <p>In your own words:</p> </div> <div data-bbox="676 485 1439 571" data-label="Text"> <p>Elevator Doors are actually 2 linked together. Advance.</p> </div> <div data-bbox="676 621 1439 749" data-label="Text"> <p>The car door attached to car and moves from floor to floor with the car and Advance.</p> </div> <div data-bbox="676 799 1439 971" data-label="Text"> <p>the hoistway doors are stationary and present at each floor level known as <i>landings</i> or <i>hoistway openings</i>. Advance.</p> </div> <div data-bbox="676 1021 1284 1106" data-label="Text"> <p><i>[Direct participants to the car and hoistway door locations.]</i></p> </div> <div data-bbox="676 1156 850 1192" data-label="Text"> <p>Advance.</p> </div>	<div data-bbox="1497 471 1787 506" data-label="Text"> <p>✓ PPT slides 8, 9</p> </div> <div data-bbox="1535 521 1854 749" data-label="Image"> </div> <div data-bbox="1535 771 1854 1006" data-label="Image"> </div>

Elevator – Door Systems

Instructor's Guide



Module Length: 90 min Time remaining: 80 min This section: 20 min (14 slides) Section start time: _____ Section End Time: _____

DO	SAY	Materials Needed
<div data-bbox="34 464 144 564" data-label="Image"></div> <div data-bbox="170 492 428 528" data-label="Text"> <p>REVIEW slides</p> </div> <div data-bbox="28 792 444 835" data-label="Section-Header"> <h3>Instructor's Notes</h3> </div> <div data-bbox="28 892 608 1242" data-label="Form"> <hr/><hr/><hr/><hr/><hr/> </div>	<div data-bbox="676 421 1023 464" data-label="Section-Header"> <h4>In your own words:</h4> </div> <div data-bbox="676 485 1439 835" data-label="Text"> <p>Each set of doors is linked together by a clutch on car doors and a pick-up roller assembly also known as <i>roller release assemblies</i> on hoistway doors. The rollers travel along a channel in the clutch as the car moves from floor level to floor level until the car arrives at the destination floor as determined by the operator control board.</p> </div> <div data-bbox="676 842 850 878" data-label="Text"> <p>Advance.</p> </div> <div data-bbox="676 885 850 921" data-label="Text"> <p>Advance.</p> </div> <div data-bbox="676 978 1410 1013" data-label="Text"> <p>Advance Pick-up rollers engage the clutch.</p> </div> <div data-bbox="676 1021 1391 1142" data-label="Text"> <p>Advance Clutch engages the interlock on hoistway door & disengages the door restrictor on car door.</p> </div> <div data-bbox="676 1149 1449 1235" data-label="Text"> <p>Advance Allows the operator to function and begins door movement.</p> </div> <div data-bbox="676 1242 850 1278" data-label="Text"> <p>Advance.</p> </div>	<div data-bbox="1497 471 1825 506" data-label="Text"> <p>✓ PPT slides 10, 11</p> </div> <div data-bbox="1535 521 1854 749" data-label="Image"> </div> <div data-bbox="1535 771 1854 1006" data-label="Image"> </div>

Elevator – Door Systems

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Module Length: 90 min Time remaining: 80 min This section: 20 min (14 slides) Section start time: _____ Section End Time: _____

DO	SAY	Materials Needed
<div data-bbox="34 464 139 564" data-label="Image"></div> <div data-bbox="170 492 251 528" data-label="Text">ASK</div> <div data-bbox="28 792 444 835" data-label="Section-Header">Instructor's Notes</div> <div data-bbox="28 892 608 1242" data-label="Form"> <hr/><hr/><hr/><hr/><hr/> </div>	<div data-bbox="676 428 1023 464" data-label="Section-Header">In your own words:</div> <div data-bbox="676 478 1439 606" data-label="Text"> <p>Lets see what we have learned so far: Two elevator doors linked together are known as:(check all that apply)</p> </div> <div data-bbox="763 614 1168 778" data-label="List-Group"> <ul style="list-style-type: none"> a. landings b. hoistway doors a. hoistway openings d. car door </div> <div data-bbox="676 792 1236 956" data-label="Text"> <p>Call on participants for answer. Advance for correct answer. Answer: b., d. Advance.</p> </div>	<div data-bbox="1526 471 1777 506" data-label="Text">✓PPT slide 18</div> <div data-bbox="1541 521 1854 749" data-label="Image"></div>

Elevator – Door Systems

Instructor's Guide



Module Length: 90 min Time remaining: 80 min This section: 20 min (14 slides) Section start time: _____ Section End Time: _____

DO	SAY	Materials Needed
<div data-bbox="34 464 139 564"></div> <div data-bbox="170 492 251 525">ASK</div> <div data-bbox="28 792 444 835"> <p>Instructor's Notes</p> <hr/> <hr/> <hr/> <hr/> <hr/> </div>	<div data-bbox="676 428 1352 871"> <p>In your own words: Order the following sequence of events:</p> <ul style="list-style-type: none"> a. Interlock disengages the door restrictor. b. Operator functions. c. Pick-up rollers engage clutch. <p>Call on participants for answer. Advance for correct answer. Answer: c., a., b. Advance.</p> </div>	<div data-bbox="1526 471 1777 506">✓PPT slide 19</div> <div data-bbox="1541 521 1854 749"> </div>

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Module Length: 90 min Time remaining: 50 min This section: 10 min (7 slides) Section start time: _____ Section End Time: _____

DO	SAY	Materials Needed
<div data-bbox="34 464 144 568"></div> <p>REVIEW slide</p> <div data-bbox="34 588 144 696"></div> <p>REFER participants to <u>Elevators 101 2nd Edition</u>, Section 10.1 10.7 pages 100 - 110.</p> <p>Instructor's Notes</p> <hr/> <hr/> <hr/> <hr/> <hr/>	<p>In your own words:</p> <p><i>[Direct participants to <u>Elevators 101 2nd Edition</u>, Sections 10.1-10.7, pages 100-110, for chapter on Elevator Doors and Gates.] Advance.</i></p>	<p>✓PPT slide 32</p> <div data-bbox="1541 521 1854 753"> </div>

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Module Length: 90 min Time remaining: 10 min This section: 10 min (4 slides) Section start time: _____ Section End Time: _____

DO	SAY	Materials Needed
<div data-bbox="34 432 144 535"></div> <div data-bbox="179 472 434 511">REVIEW slides</div> <div data-bbox="34 558 144 661"></div> <div data-bbox="179 601 241 639">ASK</div> <div data-bbox="34 682 144 785"></div> <div data-bbox="179 694 421 775">CLASSROOM ACTIVITY</div> <div data-bbox="34 792 444 839">Instructor's Notes</div> <div data-bbox="34 896 608 1239"> <hr/><hr/><hr/><hr/><hr/> </div>	<div data-bbox="678 425 1020 464">In your own words:</div> <div data-bbox="678 518 1425 601"> <p>Lets take a look at some of the key words we have defined as moved through this module.</p> <p>[Read slide. Discuss definitions as a group.]</p> <p>Advance.</p> <p>[Read slide. Discuss definitions as a group.]</p> <p>Advance.</p> <p>[Read slide. Discuss definitions as a group.]</p> <p>Advance.</p> <p>[Read slide. Discuss definitions as a group.]</p> <p>Advance.</p> <p>Administer quiz.</p> </div>	<div data-bbox="1499 472 1918 511">✓ PPT slides 37, 38, 39</div> <div data-bbox="1541 521 1854 749"> </div> <div data-bbox="1541 773 1854 1002"> </div> <div data-bbox="1541 1026 1854 1255"> </div>