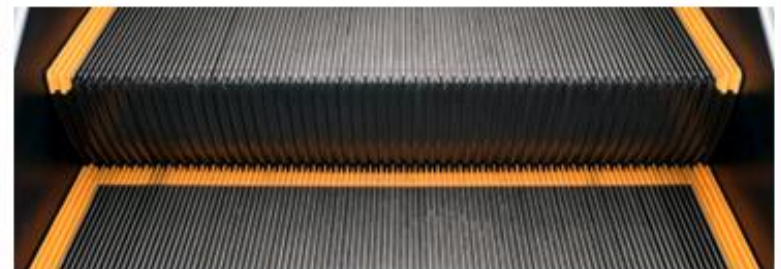


Instructor/Participant Guide



211: Escalator-Specific: Handrail Installation and Maintenance

Module 2: Handrail Drive Systems



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PREVIEW ONLY



Icons Used in This Guide

Throughout the Instructor's Guide, the following icons indicate the type of content being presented.



Refer To



PowerPoint



Multimedia



Web based Training



Write



Ask



Individual Activity



Small Group Activity



Classroom Activity



Duration

Agenda

Topic No.	Topic Title	Duration
1	Introduction	5 minutes
2	Handrail Speed	10 minutes
3	Handrail Transmissions <ul style="list-style-type: none"> • Conventional • Modular • Positive 	30 minutes
4	Handrail Profiles	10 minutes
5	Drive Types	15 minutes
6	Handrail Track Guides	10 minutes
7	Spliced handrails <ul style="list-style-type: none"> • Binding 	20 minutes
8	Drive Sheave	10 minutes
9	Adjustments <ul style="list-style-type: none"> • Tension Adjustments • Pinch Roller Adjustments 	20 minutes
10	Newels	20 minutes
11	Inlets <ul style="list-style-type: none"> • Brushes • Doors 	20 minutes
12	Summary	5 minutes
Total Time:		3 hours



Overview

Purpose	The purpose of this module is to: <ul style="list-style-type: none">• Introduce participants to Escalator-Specific: Handrail Installation and Maintenance.	Preparation	PREPARE flip charts with the following titles: <ul style="list-style-type: none">• Class Expectations
Objectives	At the end of this chapter, the learner will be able to: <ul style="list-style-type: none">• Identify the handrail drive systems and component parts used in various transit escalators.• Determine the types of handrails and installation methods (loop and splice) for various transit escalators.• Demonstrate the ability to perform wheel (roller) removal and replacement procedures for different types of steps on transit escalators.		
Materials	Make sure you have the following: <ul style="list-style-type: none">• Laptop (one for leader)• Participant Guides• PowerPoint slide deck• LCD projector• A17.2 Guide for Inspection of Elevators, Escalators and Moving Sidewalks• A17.3 Safety Code for Existing Elevators and Escalators• Heavy Duty Transportation System Escalator Design Guidelines (APTA RT-RP-FS 007-02)• Transit Agency Handbook		



Instructor's Notes



Slide 3



CLASS ACTIVITY – Choose a Case.



ASK for a volunteer to pick a case. Click on the case chosen and ask the participants if the item held within will be used with handrail drive systems.



ANSWERS:

1. Yes
2. No
3. No
4. No
5. Yes
6. Yes
7. Yes
8. No

Choose a Case

Which of these items would be used on handrail drive systems?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____



Instructor's Notes



Slide 15



REVIEW slide 15 and review the characteristics and functions of the drive sheave.



ASK participants to describe how the drive sheave operates.



ACTIVITY: If available, have participants view an operating drive sheave on an escalator. Have a volunteer indicate the various features of the sheave.

Drive Sheave



Figure 3: Drive Sheave



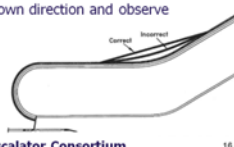
Instructor's Notes

Handrail Drive Systems

Tension Adjustments

Kone A:

- Tilt up handrail.
- Remove handrail from guide and observe tension.
- Press handrail back onto handrail guide.
- Start escalator in down direction and observe operation.

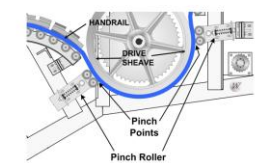


Transit Elevator/Escalator Consortium 16

Slide 16

Handrail Drive Systems

Pinch Roller Adjustments



Transit Elevator/Escalator Consortium 17

Slide 17



REVIEW slides 16 and 17 and review the tension and pinch roller adjustment procedures.



ASK: Are all escalator handrail's tension, adjusted in the same manner?

Adjustments

Are all escalator handrail's tension adjusted in the same manner?

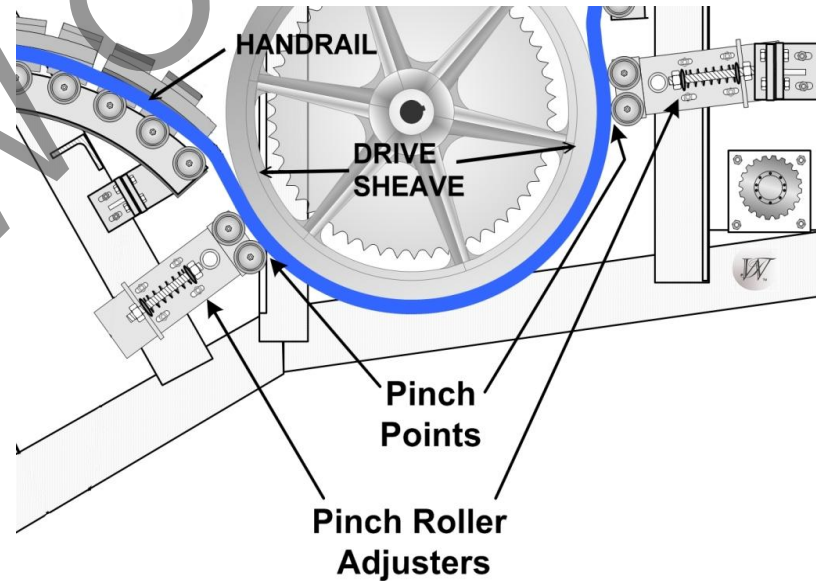
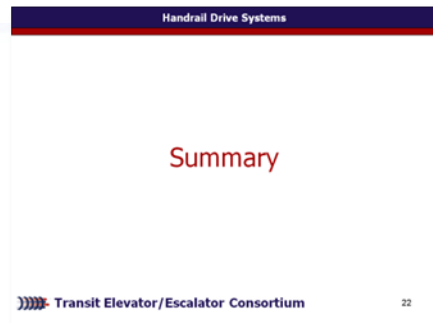


Figure 4: Pinch Roller Adjustment



Instructor's Notes

Summary



Slide 22



REVIEW slide 22 and summarize the module.



ASK the participants if they have any outstanding questions on what was presented.