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## Escalator Compliance Standard Summary Checklist Maintenance Contractors and Certificate Holders

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Compliance Standards are lists of high-risk non-compliances associated with various devices that are used as inspection tools by TSSA Inspectors during periodic inspections. For more information, visit <u>Compliance Standards - What, Why and Benefits</u>.

Escalator maintenance contractors and certificate holders are responsible for full compliance of escalators in accordance with the following regulations:

- Ontario Regulation 209/01: Elevating Devices
- Ontario Regulation 222/01: Certification and Training of Elevating Device Mechanics
- <u>Elevating Devices Code Adoption Document Amendment 277-19</u> as well as all applicable <u>Director's Orders</u>
- ASME A17.1-2019/CSA B44:19– Safety Code for Elevators and Escalators

**IMPORTANT NOTE RE: BARRICADES** - When contractors complete any work on an escalator, they must ensure barricades or other guards are placed around the escalators or moving walks and **shall be so secured in place** as to prevent any passerby from gaining access to the escalator or moving walk by simple actions, such as lifting and pushing the barricade aside or by stepping\* over the barricade whenever work is completed on the device. \*Note: Based on the Ontario Building Code [re: guards], barricades of at least 1,070 millimetres (42 inches) in height should meet the intent of this part of the requirement.

The components listed below are high-risk items that must be inspected regularly to ensure public safety. The maintenance contractor or certificate holder must complete the established maintenance control program and ensure all items remain in compliance.

During the periodic inspection, TSSA will be checking the following items and orders will be issued for non-compliance.

**SHUT-DOWN** - If an item is deficient and an order is issued for immediate compliance (0 days for the compliance time):

- Remove the device from service and
- Repair before putting it back into service
- A repair can be done immediately during the maintenance unless it is a reportable incident according to the <u>Incident Reporting Guidelines</u>. Even if it is a reportable incident, a TSSA Supervisor, Incident Management Specialist or Investigator can authorize an immediate repair.

**REPAIR / REPLACE** - If an item is deficient and an order is issued with a 14-day time period for compliance:

• Fix as needed.

	Component Compliance Standards	Shut Down	Repair / Replace
Gene	eral		
•	If licence has expired		$\checkmark$
Stop	Switches		
•	Any machinery space stop switch is inoperative.	$\checkmark$	
•	Any emergency stop button is inoperative.	$\checkmark$	
Cont	roller		
•	Any electrical protection device is inoperative.	$\checkmark$	
٠	There are defects in controllers or wiring.		$\checkmark$
٠	Controller wires are not properly inserted into terminal blocks.		$\checkmark$
٠	Bare live wires are not guarded against contact.		$\checkmark$
•	There is debris in any controller cabinets.		$\checkmark$
Brak	es		
•	The brake data plate is not posted or legible.		$\checkmark$
•	The brake adjustment procedure is not posted or does not contain detailed instructions for setting the brakes.		$\checkmark$
•	If maintenance has been completed on the brakes and damage or improper operation has been discovered for any of the following: - Residual/antimagnetic pads - Lining and running clearances - Pins and levers - Springs - Sleeves and guide bushings - Disks and drums - Brake coil or plunger		✓
•	All manufacturer specified maintenance has not been performed.		$\checkmark$
•	The drive machine brake test demonstrates non-compliance and is not documented in the logbook. Note that the drive machine brake test		✓

Component Compliance Standards	Shut Down	Repair / Replace
must be performed when any part of the brake that may affect the brake's holding capacity is replaced or adjusted.		
The drive machine brake torque exceeds the maximum stated on the brake data tag.	$\checkmark$	
<ul> <li>The no-load down stopping distance does not comply with the brake data tag.</li> </ul>	$\checkmark$	
<ul> <li>For dynamic braking:</li> <li>The written test procedure is not posted.</li> </ul>		$\checkmark$
<ul> <li>For dynamic braking:         <ul> <li>The deceleration and/or stopping distance does not comply with the posted requirements.</li> </ul> </li> </ul>	$\checkmark$	
<ul> <li>Escalator Speed Monitoring Device (Speed Governor)/Reversal Stop Device</li> <li>Escalator speed monitoring device (speed governor) or the reversal- stop devices are inoperative.</li> </ul>	✓	
<ul> <li>Drive-Chain Device (Broken Drive-Chain Device)</li> <li>The broken drive-chain device is inoperative or does not actuate the emergency brake on the main drive shaft.</li> </ul>	$\checkmark$	
<ul> <li>Broken Step-Chain Device</li> <li>The broken step-chain device or the tension carriage does not have free motion.</li> </ul>	✓	
Steps		
<ul> <li>Steps have cracks, sharp edges, dents, damaged risers, improper engagement, broken treads or non-compliant widths and depth slots.</li> </ul>	$\checkmark$	
• Step up-thrust device, the missing step device or the step level device are inoperative or do not have a manual reset. Note: A step up-thrust manual reset is only required for installations in accordance with 2019 or successor codes.	~	
• Steps, step chain or trusses have structural defects, have a buildup of combustible materials or are not in good mechanical condition.		✓

Component Compliance Standards	Shut Down	Repair / Replace
The clearance between successive steps is more than 6 mm (0.25 inches).		~
Skirt Panels/Skirt Obstruction Devices		
<ul> <li>Balustrades are damaged.</li> </ul>		$\checkmark$
Balustrade fasteners have burrs or snag points.		$\checkmark$
Gap between glass balustrades exceeds 5 mm (3/16 inch).	$\checkmark$	
• Skirt obstruction device is improperly adjusted or inoperative (required to be a manual reset when installed in accordance with 2019 code or later editions of the code).	<ul> <li>✓</li> </ul>	
<ul> <li>Step to skirt gap exceeds required tolerances in <u>Table 1 - Tolerances</u> posted on the TSSA website.</li> </ul>	<ul> <li>✓</li> </ul>	
<ul> <li>SSPI test results do not comply with allowable tolerances in <u>Table 1 -</u> <u>Tolerances</u> posted on the TSSA website.</li> </ul>	<b>√</b>	
<ul> <li>Combplates</li> <li>All comb sections are not properly mounted, are cracked or have broken teeth.</li> </ul>		✓
<ul> <li>Combplate teeth are not in good condition or two adjacent teeth are missing.</li> </ul>	<ul> <li>✓</li> </ul>	
• The combs do not mesh with the slots in the step surface so that the points of the teeth are always below the upper surface of the treads.	<ul> <li>✓</li> </ul>	
<ul> <li>Any comb impact device does not trip or shut the unit down when the forces specified in <u>Table 2 – Combplate Forces</u> posted on the TSSA website are applied in the direction of travel.</li> </ul>	$\checkmark$	
Activation of the comb impact device does not have a manual reset.	<ul> <li>✓</li> </ul>	
Landings - Entrance and Egress Ends		
<ul> <li>Upper or lower landing plates have tripping hazards or are not maintained to provide a firm foothold.</li> </ul>		$\checkmark$

Component Compliance Standards	Shut Down	Repair / Replace
<ul> <li>Landing plates are not secured in place as per design.</li> </ul>		$\checkmark$
Entrance or exit safety zones are obstructed.		$\checkmark$
Handrails		
Handrails are damaged or cracked		$\checkmark$
Handrails have pinch hazards	$\checkmark$	
Handrail speed does not match the speed of the steps.	$\checkmark$	
The hand or finger guards (at handrail entry) are damaged	$\checkmark$	
The handrail entry device is inoperative.	$\checkmark$	
The handrail speed monitoring device or stopped handrail device are inoperative.	$\checkmark$	
Deck Barricades		
Outer deck barricades are not in place or are damaged.		$\checkmark$
Guarding		
Ceiling guards are not in place or are damaged.		$\checkmark$

## In the Event of an Incident

- Incident reporting is required by law <u>Director's Guideline #230/09</u>.
- In the case of death, serious injury or immediate hazard, call TSSA at 1-877-682-8772.
- Report all incidents to TSSA by email at <u>ed-incident@tssa.org</u> or call **1-877-682-8772**.
- View the Incident Reporting Guidelines and submit the required Incident Reporting Form.

## **More Information**

Visit <u>www.tssa.org</u> for more detailed information about compliance standards for escalators.