



Elevating and Amusement Devices Safety Division	Ref. No.: 267/14
DIRECTOR'S ORDER	Date: May 15, 2014

IN THE MATTER OF:

Technical Standards and Safety Act 2000, S.O. 2000, c. 16

- and -

Ontario Regulation 209/01 (Elevating Devices)

Re: Retroactive Leveling Requirement for Passenger Elevators with Single Speed Controls

Applicable to: All Owners of Electric Passenger Elevators with Single Speed Controls
All Elevator Contractors

Under the authority of s. 31 of the Technical Standards and Safety Act, 2000, the Director under O. Reg. 209/01 (Elevating Devices) hereby orders that:

1. ORDER to Owners

- 1.1. All Electric Passenger Elevators with Single Speed Control systems that;
- (a) have a single speed AC drive motor,
 - (b) use an open loop motion control system, and
 - (c) stop using the brake, whether the brake is modulated or continuously applied.

shall have the motion control system upgraded to a closed loop control and comply with CSA B44-10 - Safety Code for Elevators and Escalators (the "B44 Code"), section **2.26.11 - Car Platform to Hoistway Door Sills Vertical Distance**.

The requirements from the B44 Code are as follows:

2.26.11 Car Platform to Hoistway Door Sills Vertical Distance

Where ANSI/ICC A117.1 or ADAAG is not applicable, the vertical distance between the car platform sill and the hoistway door sill on passenger elevators shall be in accordance with the following:

- (a) it shall not exceed 13 mm (0.5 in.) on initial stop at a landing*
- (b) the car shall relevel if the vertical distance exceeds 25 mm (1 in.) while loading or unloading*

This leveling requirement is being applied retroactively to existing installations of passenger elevators with single speed controls.

- 1.2. The compliance dates for this order are based on the installation number of the elevating device. The following table indicates the compliance date for each range of elevating device installation numbers.

Compliance Requirements	
Installation Number	Compliance Date
1 – 9481	January 1, 2018
9482 - 13371	January 1, 2019
13372 – 18161	January 1, 2020
18162 – 35418	January 1, 2021
35419 and higher	January 1, 2022

- 1.3. Where the above leveling requirement is met by an alteration that changes the type of motion control, the following alteration requirements (8.7.2.27.5★1) may be used as an alternative to the requirements of B44 Code section 8.7.2.27.5 (Change in the Type of Motion Control):

8.7.2.27.5★1 Change in type of motion control for single speed passenger elevators

Where there is a change in the type of motion control of a single speed elevator, the installation shall conform to the following:

- (a) The terminal stopping devices shall conform to 2.25
 - (b) New and altered operating devices and control equipment shall conform to 2.26. The requirements of 2.26.4.2, 2.26.4.3, and 2.26.4.4 shall not apply to electrical equipment unchanged by the alteration.
 - (c) Car overspeed protection and unintended movement protection shall conform to 2.19 as required by 8.7.2.20 or permitted by 8.7.2.20★1.
- 1.4. An alteration in accordance with alternative requirement 8.7.2.27.5★1 (above) is deemed to be a Major Alteration.
- 1.5. Where the leveling requirement is met by an alteration that changes the type of motion control in accordance with the requirements of B44 Code section 8.7.2.27.5, sub requirements 8.7.2.20★2 and 8.7.2.20★3 are not applicable. Both ascending car overspeed and unintended movement protection are required.

2. INSTRUCTIONS

- 2.1. All work must be performed by a TSSA registered contractor.
- 2.2. Work carried out in order to bring a device into compliance with this order is an alteration and a design submission with related electrical schematics shall be submitted to TSSA by a registered contractor.
- 2.3. The contractor who completes the alteration shall arrange for an inspection to be carried out as required by O. Reg. 209/01.

Background

TSSA formed a Risk Reduction Group (RRG) in 2010 to review the risks associated with aging elevators. The RRG, called the “Elevator Overspeed and Unintended Movement RRG”, was tasked with examining the risks associated with devices having no emergency brakes and devices with leveling accuracy

problems, and to make recommendations on how these risks could be reduced. The group consisted of members representing TSSA, the elevator industry and elevating device owners.

The RRG data analysis indicated that the primary risk with aging elevators was with single speed devices. These devices typically do not have an emergency brake and experience problems with leveling accurately. Analysis of inspection and incident data determined that there was an unacceptable public risk of injury from single speed devices that will occur in 2020.

The new alteration requirement (8.7.2.27.5★1) introduced by this order focuses on the leveling aspects of B44 Code requirement 8.7.2.27.5 and is only permitted to be used on single speed devices. This new alteration requirement offers a more economical method to address the leveling risk identified by the RRG.

The compliance dates were determined based on the time period required to reach an unacceptable level of risk. It is estimated that 1100 devices are affected by this order. The affected devices have been split into five groups with the older devices requiring compliance before the newer devices. Dividing the devices into five groups with different compliance dates is intended to ensure that higher risk devices are in compliance sooner and to help spread out the work over a larger period of time to manage industry workload.

* * *

Any person involved in an activity, process or procedure to which this document applies shall comply with this document

This order is effective immediately.

DATED this 15th day of May, 2014

Roland Hadaller P. Eng.
Director, O. Reg. 209/01

This order has been developed in consultation with the Elevating Devices Advisory Council and the Field Advisory Committee.