



Elevating and Amusement Devices Safety Program	Ref. No.: 307-25
Director's Safety Order	Date: February 21, 2025

IN THE MATTER OF:

Technical Standards and Safety Act 2000, S.O. 2000, c. 16
- and -
Ontario Regulation 209/01 (Elevating Devices)

Re: Smartrise SRA (V3 CEDES) Controllers with single door zone sensor

Under the authority of s. 14 of the *Technical Standards and Safety Act, 2000*, the Director for the purposes of O. Reg. 209/01 (Elevating Devices) hereby orders that:

1. Application and Compliance Timeline

1.1. This order applies to Elevators:

- 1.1.1. with a Smartrise SRA (V3 CEDES) traction controller;
- 1.1.2. registered and installed using CSA Standard B44 Elevators and Escalators; and
- 1.1.3. having a single sensor to determine position for the levelling and Unintended Car Movement Protection safety circuits.

1.2. All Owners and Licensees shall ensure that their Elevators are:

- a. assessed in accordance with section 2 not later than **June 1, 2025**; and
- b. have software altered and submit a Minor A Alteration Design Submission in compliance with section 3 of this order not later than **December 1, 2025**, where applicable.

1.3. Elevators not in conformance with the timelines above shall be removed from service until the required actions are completed.

2. Assessment of Affected Elevators and Timeline

2.1 Prior to **June 1, 2025**, all owners of Elevators to which this order applies as per section 1.1 of this order shall engage the services of a registered elevating devices contractor whose scope of work includes elevators to determine if the elevator:

- 2.1.1 has a failed single door zone sensor;
- 2.1.2 has the potential to move with doors open when the single door zone sensor has failed; or
- 2.1.3 is operating on a software version prior to version V3.18(c).

2.2 A failed door zone sensor shall be considered a condition that constitutes an immediate hazard and the contractor shall therefore comply with O. Reg. 209/01, s. 36(4), including removing the elevating device from service and ensuring the door zone sensor is repaired prior to being returned to service. The licence holder must complete an incident report as per O. Reg. 209/01, s. 36(5).

2.3 Elevators having a software version prior to version V3.18(c) shall have their software altered to version V3.18(c) or newer and a Minor A Alteration Design Submission submitted in compliance with section 3 of this order prior to **December 1, 2025**.

2.4 Elevators with software version V3.18(c) or newer shall have a Minor A Alteration Design Submission compliant with section 3 of this order submitted to TSSA by **December 1, 2025**. If a compliant submission was made prior to this order, no further action is required.

2.5 Elevators not in conformance with the timelines above, may be subject to a TSSA shutdown.

3. Design Submission Alteration Scope

3.1 When an alteration is undertaken to alter the software to version V3.18(c) or newer, the contractor shall submit a Minor A Alteration design submission, referencing B44-19 alteration requirements 8.7.1.1, 8.7.1.10, 8.7.2.20, and 8.7.2.27.2:

B44:19 Reference Number	Alteration Checklist for Director's Order 296 / 22-(r20240105) (see also Guideline 296 / 22) Scope of Alteration - B44 - 2019 Part, Section or Requirement	Alteration
		Modification Change
8.7.1.1	When any alteration is performed, regardless of any other requirements of Section 8.7, the installation, as a minimum, shall conform to the Code at the time of installation and the code requirements for the alteration at the time of any alteration.	
8.7.1.10	Executable Software Verification and Witness Test 2.26.1.7.1 Executable Software (new USI shall be logged in the on-site documentation)	Minor A
8.7.2.20	Ascending Car Overspeed and Unintended Car Movement Protection 2.19. Ascending Car Overspeed & Unintended Car Movement Protection	Minor A
8.7.2.27.2	Car-Leveling or Truck-Zoning Devices 2.26.1.6 Operation in Leveling or Truck Zone	Minor A

3.2 The elevator contractor shall alter the control system software located in the machine room (MR SRU), car operating panel (COP SRU or CAR SRU 1) and car top or COP (CT SRU or CAR SRU 2) control boards (SRU Boards) to comply with CSA B44-19 for the scope of the alteration. This order addresses non-compliance with B44-19 clauses 2.19.2.2(a)(1)(b)(4), 2.19.2.2(a)(3), 2.26.9.3.1(a) and (b), and 2.26.9.4, any additional alterations shall also be included in the scope of alteration.

3.3 A full set of accurate and complete electrical schematics that match the installed elevator and acceptance testing procedures to demonstrate compliance with the referenced clauses of B44-19 2.26.1.7.1 shall be submitted as part of the design submission.

3.4 All individual documents comprising a design submission shall bear the signature and seal, or the electronic equivalent, of the professional engineer who prepared or approved the design submission (see O. Reg. 209/01 for complete requirements regarding alterations). The *Submitter's Specification No.(Box 120)* on the submission and specification sheet shall include ED 307-25.

3.5 The contractor who performed the alteration shall also request an inspection within the timelines prescribed by the regulation (see O. Reg. 209/01, s. 19(2)). Contact Workforce Management at edadinspection@tssa.org to book an inspection.

4. Exceptions

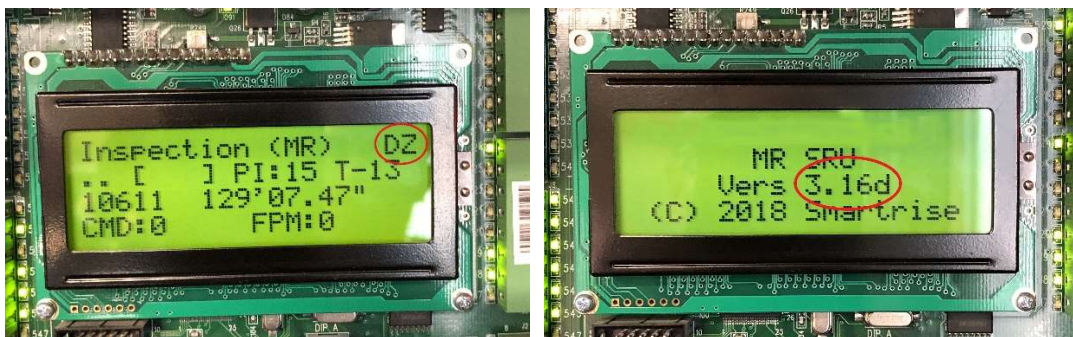
4.1 Acceptance Inspections and Tests

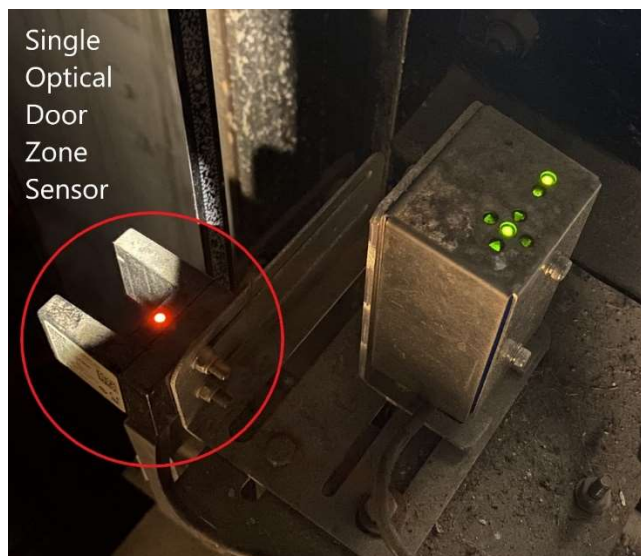
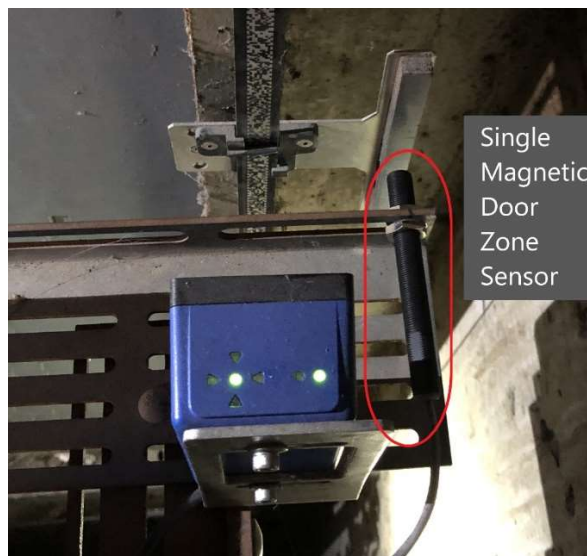
4.1.1 Despite 8.10.2.2.2(jj)(2), Unintended Car Movement Protection (2.19.2.2) is permitted to be tested without rated load in the up direction only. If the test results in a stopping position in the up direction exceeding the permitted maximum 1220 mm (landing sill to car sill), the emergency brake shall be adjusted or repaired and tested with rated load in the down direction.

5. Background

During a Category 5 (CAT5) test on a traction elevator equipped with a Smartrise SRA (V3 CEDES) controller, CEDES Absolute Positioning System, and a single door zone sensor (sensing the position 75 mm above or below a landing), a mechanic observed a potential safety concern that could result in serious injury or death. A single door zone Sensor (either Magnet or Optical) can fail, and the elevator may move with the doors open which is not permitted by B44 clause 2.26.9.3 and 2.19.2 (no redundancy provided). The CEDES Absolute Positioning System was not being used by Smartrise to determine the door zone. When the car was moved away from the landing, it traveled toward the nearest landing with both hall and car doors open before stopping at the landing. The failure of the single sensor was not detected as required by B44 clause 2.26.9.4 (failure detection). Unintended car movement will not be detected as the system believes the elevator is always within a door zone. Further testing of the Unintended Car Movement Protection revealed that the car could drift 2438 mm (6-8 ft.) or more before stopping, which does not meet the maximum 1220 mm (48 in.) required by B44 clause 2.19.2 Unintended Car Movement Protection. Smartrise has issued a mandatory Technical Service Bulletin - TSB-0016 on **December 10, 2024** which requires the software to be altered on affected elevators. TSSA has determined that the affected elevator's original design submission were not in compliance with the regulation and did not contain the correct electrical schematics and referenced a controller filing which uses two door zone sensors (DZ1 and DZ2) and an IP8300 perforated tape landing system, which does not match the installed elevator. As a result, the electrical schematics of record for the affected elevators are incorrect. The correct schematics are required to be submitted as part of the Minor A Alteration design submission required by this Director's order. Testing of Unintended Car Movement Protection is permitted to be done without load in the car since this alteration does not involve the emergency brake itself, only the detection of movement is being tested. This Director Order only applies to the Smartrise SRA (V3 CEDES) traction controllers and does not apply to other Smartrise controllers (e.g. SRH, C4).

The software version and status of the door zone sensor can be viewed on the main Car Status screen. The Door Zone "DZ" signal should change state as the elevator moves through the Hoistway. Software versions installed on the main controller in the machine room (MR SRU), car operating panel (COP SRU or CAR SRU 1) and car top or COP (CT SRU or CAR SRU 2) control boards (SRU Boards) should be the same software version with V3.18(c) or newer displayed.





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 21st day of February, 2025



AJ Kadrigamar
Director, O.Reg 209/01 (Elevating Devices)

**Technical Service Bulletin**

Date: December 10, 2024

Route to: Service/Maintenance Manager

In Reference To: Version V3, failure to detect DZ Stuck High/Low

Equipment NOT Affected: V2 (Traction & Hydro), C4 (Traction & Hydro)

Equipment Affected: Elevator Controller Type SRA with software version V3.14-V3.18(b) with CEDES APS.

Description: While on machine room inspection mode, the CAT 1 test of Unintended Movement (UM) at a designated opening failed and the electronic overspeed fault stopped movement. Upon exit of inspection mode, the car was located outside of the UM zone. It leveled back to the designated opening with the hall door unlocked and the car door closed. The investigation found that the DZ sensor was stuck in a high state undetected.

Action: Mandatory

Fix: Request for update to software to V3.18(c) by contacting our Technical Support Department at: (469) 678- 8000 or support@smartrise.us

If you have any questions, please reach out to our Technical Support department by phone: 469-678- 8000 or by email: support@smartrise.us.