Incident Summary #II-1945272-2025 (#58276) (FINAL)

SUPPORTING INFORMATION	Incident Date		July 21, 2025
	Location		West Vancouver
	Regulated industry sector		Elevating devices - Elevator
	Impact – Injury	Qty injuries	1
		Injury description	A patient experiencing a serious heart attack was not transported by emergency medical services to the hospital in a timely manner due to an elevator entrapment. The patient was trapped inside elevator along with three BC Emergency Health Services (BCEHS) members.
		Injury rating	Moderate
	Damage	Damage description	The elevator car doors were pried open using the jaws of life by the responding fire department bending and breaking the door latch and track components.
		Damage rating	Major
	Incident rating		Major
	Incident overview		BCEHS members responding to an emergency medical call at an apartment building got trapped in the elevator with a patient while descending to the ambulance from the patient's apartment. They were trapped in the elevator for 25 minutes until the fire department responded with the jaws of life and pried the door open releasing the trapped occupants.
INVESTIGATION CONCLUSIONS	Site, system and components		The building is a residential apartment tower built in 1968. It utilizes two Otis electric passenger elevators that serve the 18 floors in the building. The elevator car door is operated by a small electric motor and a cogged belt mounted on the car top. The car door panel rides on a track for smooth movement that has rollers that ride on top of a rail. Underneath the rail, smaller upthrust rollers use an eccentric cam and are installed and set up to prevent doors from lifting off the top rail if upward force is applied to them (Image 4). The roller is typically adjusted for proper operation with a small gap to the top rail, so it does not touch the rail unless there is an upward force on the door. The bottom of the car door slides inside a channel in the door sill plate and uses plastic gibs attached to brackets on the bottom of the door. Door gibs are blocks that fit into the door sill groove and keep the doors aligned during opening and closing. The gibs ensure smooth movement, reduce friction and wear, and prevent it from being pushed outward from inside the car. Broken gibs can cause the door to drag or scrape, inhibiting the smooth operation of the door or become misaligned which can trigger door safety circuits. The controller monitors the car door location using the encoder position of the electric door operator motor and a physical interlock switch that closes when the door is physically in the closed position. If the motor position or the door interlock switch does not indicate the door is in the fully closed position the elevator will not operate.

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	The door is equipped with a light bar sensor (light curtains) that runs down the entire length of the door. If the light beam is interrupted by something blocking it, it will stop closing and retracting the door. After a short time, the door will try to close even if the light sensor is still interrupted. The door will close at a reduced speed with up to 30 pounds of nudging force. If multiple attempts to close the door fail, a buzzer sounds in the elevator to alert the occupants that the door is not closing. If the door continues to fail to close the elevator controller will lock out the operation and go into a fault mode requiring a technician to rest the operation. The elevator has an independent mode that is accessed with a key that allows the elevator to only by used by the operator and will not respond to elevator calls (Image 3). It will not close the door unless the “close door” button is pushed and held. The building manager always has a copy of the key. Section 8.6 of the current B44 Safety Code for Elevators and Escalators requires a maintenance control program (MCP) to be in place to maintain elevating equipment in compliance with the requirements. The MCP must include examinations, tests, cleaning, lubrication, and adjustment to applicable components at regular intervals.
Failure scenario(s)	One of the elevators in the building was receiving a major upgrade. Delays on the project extended the timeframe of the upgrading work leaving the building with only one operating elevator for almost two years prior to the incident. The one operating elevator was in high demand and experienced frequent shutdowns leaving the 18-floor building without any operating elevator until service technicians could be dispatched to repair the elevator and place it back into service. In the two months prior to the incident, the only operating elevator broke down six times requiring an elevator technician callout to return the elevator to service. The lone operating elevator in the building had received routine maintenance and inspections as outlined in the elevator MCP. The checklist items for the car doors including hangers, tracks, rollers, upthrusts, safety retainers, sills, bottom guides fasteners and general condition and engagement were signed off by an elevator mechanic in April 2025 just three months before the incident. An elevator mechanic working for the contractor responsible for maintaining the elevator stated that the adjustable eccentric rollers used for adjusting up-thrust on the elevator door were maxed out and could not be further adjusted to tighten up the roller gap which helps keep the car door on track to prevent it from becoming dislodged jamming the door operation. The next scheduled maintenance for these checklist items was due in July 2025 and had not yet been completed prior to the incident. On July 21st, 2025, an occupant in a 14th floor apartment was experiencing a medical emergency and 911 was called. When the BCEHS members responded to the medical call they entered the building and took the only operating elevator up to the 14th floor. While transporting the patient to the hospital, three EMT’s loaded the elevator with the patient on a stretcher. The elevator was in regular operation mode and due to the light sensor being blocked by the BCEHS members while loading the patient on the stretcher and associated medical equipment, the door attempted to close in nudging mode four times. During the last attempt to close, two BCEHS members placed their hands on the top of the car door to stop it from closing (Image 1). The force on the top of the door combined with the set gap between the top rail and the eccentric roller allowed the door to disengage from the rail guide. The motor

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	could not overcome the extra force required to move the door while it was derailed from the guide, and the elevator control went into fault mode while to elevator door was only partially closed. One of the BCEHS members in the elevator then manually forced the door to the closed position. When the door closed the hall door latched into the interlock and both the hall door and the car door would not reopen entrapping the occupants in the elevator. The elevator eventually began descending while making scraping noises and briefly pausing on the 12, 11, and 10th floor without opening. It then proceeded down to the main lobby and remained there until the responding fire department was able to pry the doors open allowing the occupants to exit. The Code 3 patient transport to hospital was delayed by 25 minutes while they were trapped in the elevator.
Facts and evidence	**Interview statements** Elevator technician • The door tracks use an eccentric upthrust roller to adjust the clearance above the top rail which limits the amount a door can be lifted off the rail. • The upthrust rollers are typically set to 1/16th of an inch clearance with a feeler gauge. • The upthrust rollers clearance is typically checked annually during routine maintenance and inspections. • Wear of the components resulted in the upthrust rollers being maxed out without any further available adjustability to keep the clearances in spec. • Blocking the elevator car door can makes it come off the tracks when the upthrust clearances are not set up correctly, which makes it too hard for the motor to physically move it back and forth. • The elevator independent mode uses a keyed switch to put the elevator into a manual operating mode. In that mode it will not respond to calls from other floors and bypass the automatic door closing mode. It will remain on its floor, and the door will only close when the door close button is pushed and held in. Building manager • The building has had only one working elevator for almost two years due to the delayed completion of the other elevators major upgrade. • The only working elevator had experienced frequent shutdowns leaving the building without an operating elevator until technicians could respond to place the elevator back into service. • They control the elevator key for independent mode and would be able to supply it to emergency services if it was requested by them. • The elevator had recently been experiencing a much higher rate then usual of breakdowns requiring attendance from the elevator mechanics. **Documents** Elevator maintenance contractor tickets • “Routine maintenance service” was conduct on May 22nd and June 20th, 2025. Each was completed with one documented hour of labor. • In the six weeks prior to the incident, six trouble callout tickets were generated for the only working elevator in the building not operating.

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Elevator maintenance control plan logbook

- Monthly maintenance visits were recorded in the logbook for February, March, April and May in 2025.
- MCP checklist items: 8.6.4.13.1(a) “Hangers, tracks, door rollers, up-thrusts, and door safety retainers” and 8.6.4.13.1(b) “Sills and bottom guides, fastening, condition and engagement.” were identified as being inspected and maintained April 2025.
- The next scheduled inspection and maintenance of these items was due July 2025 and had not yet been conducted prior the incident.

BCEHS response documentation

- They arrived at the building and took the only operating elevator to the 14th floor to attend to the patient.
- Monitoring of the patient identified they were having a ST-segment elevation myocardial infarction (STEMI) which is a severe type of heart attack requiring immediate treatment and any delay in higher care could have severe consequences.
- The patient was transported on a stretcher to the elevator, and the door was held open to give sufficient time for all members and equipment to be loaded into the elevator car.
- The door closed and jammed, and the elevator would not proceed downward, and the door would not reopen trapping the patient and three members in the elevator car.
- After several minutes the car proceeded downwards making scraping noises.
- The elevator emergency intercom connected to an operator who offered to call 911 for them.
- The members were unable to contact dispatch with their radios as there was no radio service.
- One member used their personal phone to contact dispatch and update the hospital about the situation and delay.
- The elevator eventually reached the lobby floor, and the Fire Department used the jaws of life to open the door and extract the patient and the three members after a total time of 25 minutes trapped in the elevator.
- The patient was then transported to the hospital Code 3.
    - *Emergency response with lights and sirens indicating that the situation is urgent and requires immediate attention from paramedics. This is the highest priority response mode for BC Emergency Health Services (BCEHS) and is typically used for life-threatening or critical emergencies to the hospital for treatment.*

Surveillance video

- 16:57
    - The elevator descended to floor 14 and the door opened to load the patient on a stretcher along with three BCEHS members into the elevator car.
    - During loading of the car, the door attempted to close three times. The first two times door was stopped by the members near the bottom of the door.
    - The third time two members pushed the door back near the upper third portion of the door. On its fourth attempt to close, the door only partially closed an estimated 8-10” and stopped.
    - One member then manually forced the stuck door to the almost fully closed position.

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	• 16:58
	  ○ The elevator did not proceed down, and two members attempted to manually reopen the door. When that was unsuccessful, they manually force the door to the fully closed position.
	• 16:59
	  ○ The elevator travelled down and stopped at the 12th floor. Then proceeded down to the 11th floor, paused briefly then went to the 10th floor and stopped.
	• 17:03
	  ○ The elevator began moving again and proceeded all the way down to the lobby floor.
	• 17:23
	  ○ The fire department began prying open the door with the jaws of life.
	• 17:26
	  ○ The members and the patient exited the elevator car.

Causes and contributing factors	The manual forcing open of the elevator door as it was attempting to close resulted in the door derailing from the door track. High use, age and wear made the door more susceptible to coming off the track while in nudging mode. The manual closing of the jammed door by the occupants caused the entrapment in the elevator. Contributing factors to the incident include: • The delayed major upgrade of the second elevator in the building resulted in high demand use and critical operation of the sole operating elevator which likely factored in decisions involving maintenance, repairs and the associated downtime to keep the elevator in optimal operating condition. • The elevator was in general operation mode while it was used to transport a patient during an emergency. Alternatively, the elevator could have been used in independent mode if paramedics had been provided with a key available from the building manager. This would have prevented the elevator doors from continuing to attempt to close and nudge which resulted in the eventual jamming of the door.

Image 1 – Surveillance video still of BCEH members pushing on the top of the door as it was attempting to close for the third time.

Image 2 - Surveillance video still of BCEH members manually pushing the door closed after it jammed while automatically attempting to close.

Image 3 – The panel inside elevator #1. The key switch to place the elevator into independent mode.

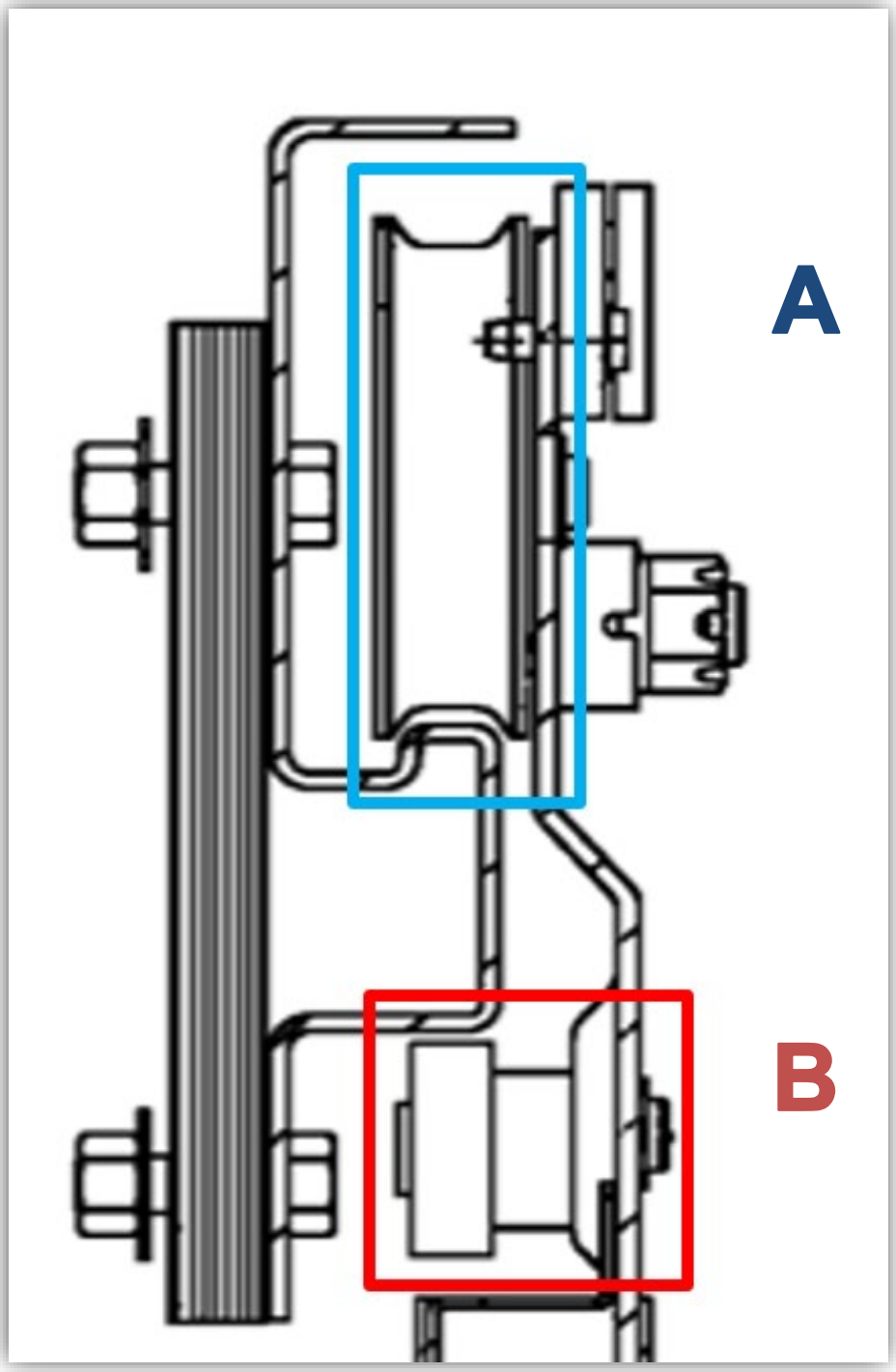

Image 4 – Example of a car door track system. [A] Roller on top rail. [B] Eccentric adjustable roller on bottom of rail.