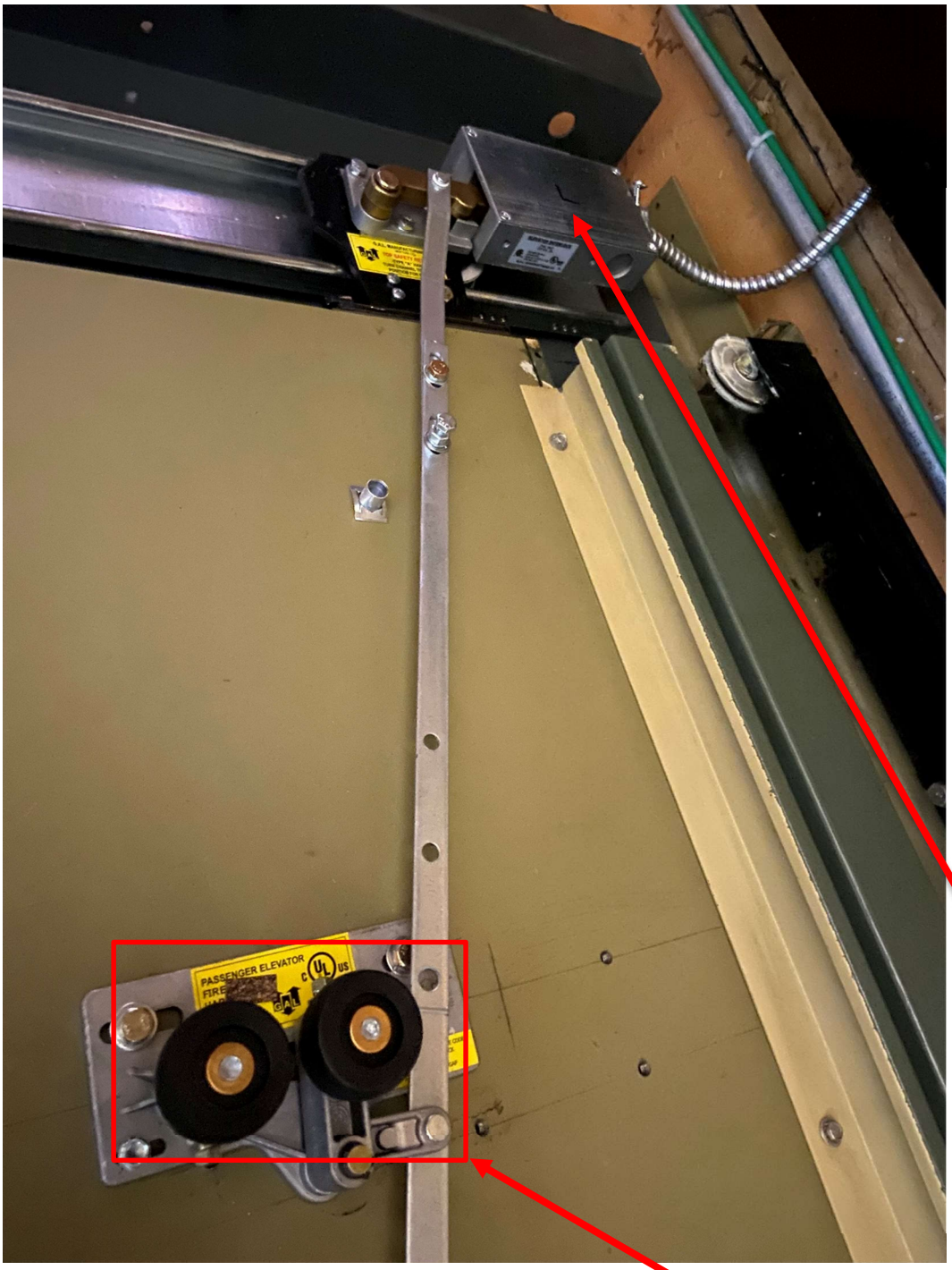
Incident Summary #II-1200230-2021 (#22172) (FINAL)

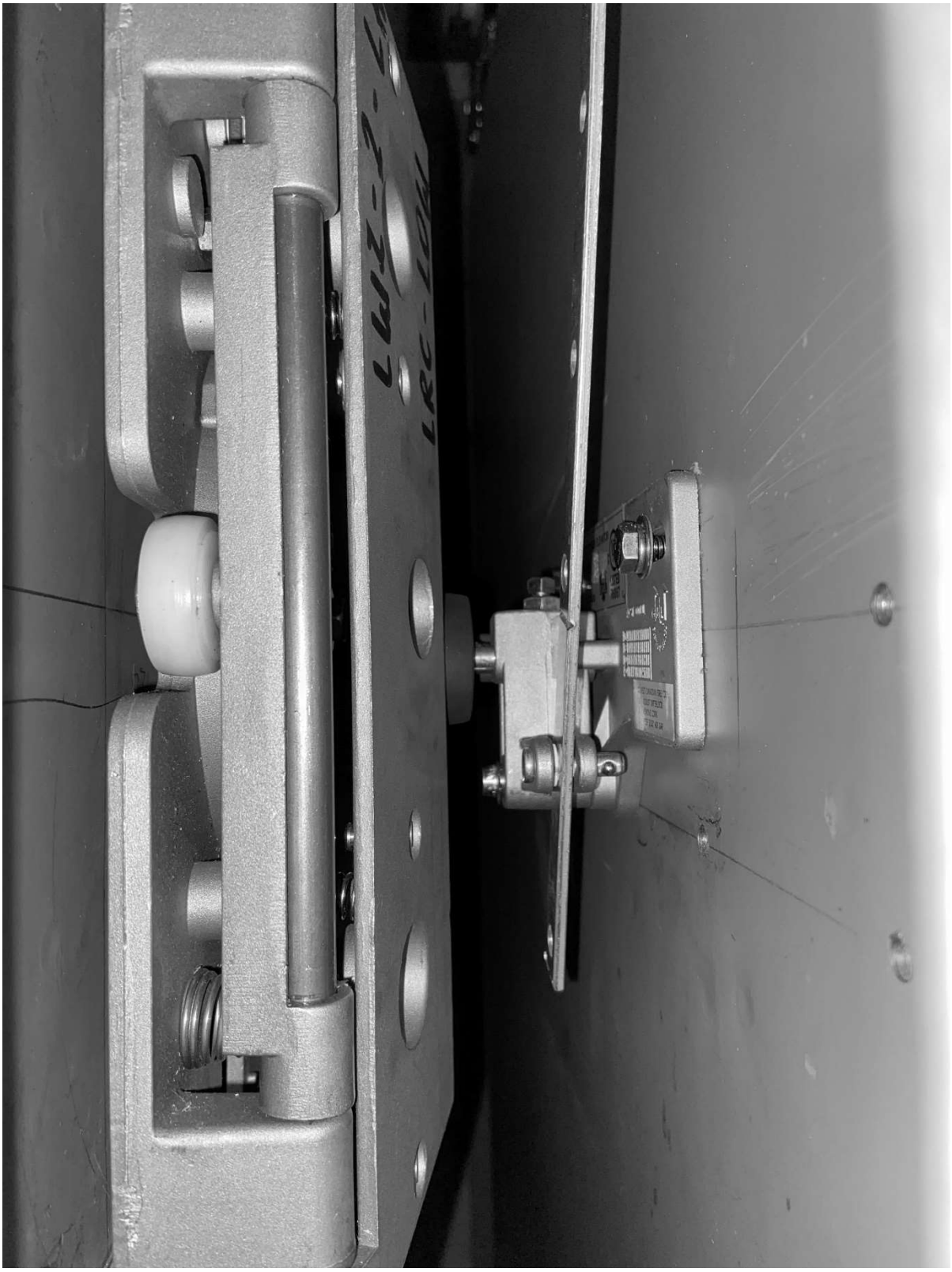
SUPPORTING INFORMATION	Incident Date		May 25, 2021
	Location		Vancouver, BC
	Regulated industry sector		Elevating devices - Elevator
	Impact – Injury	Qty injuries	1
		Injury description	Tailbone / buttocks
		Injury rating	Insignificant
	Impact – Damage	Damage description	No damage to regulated equipment
		Damage rating	None
	Incident rating		Insignificant
	Incident overview		Passenger entered the elevator from the top landing and entered a call to P2 at about 1940hrs. As the elevator traveled to P2, the elevator suddenly stopped (emergency stop) near level 3. Due to the sudden stop, the passenger fell on their buttocks. After a few seconds after the sudden stop, the elevator opened and closed the door at level 3. The passenger swiped their security pass and entered a call to P2. The elevator proceeded to P2 without any issues.
INVESTIGATION CONCLUSIONS	Site, system and components		• At each floor level, there is a hall door that restricts passage of people from entering the hoistway when the elevator car is not at that landing. • New buildings are prone to settling, which can cause elevator components to shift slowly over time. • A car door is equipped with a door clutch that grabs the hall door's pick up rollers when an elevator car is at a landing. (see photos) • As the car door opens, the clutch will squeeze the pick up rollers that are located on the hall door which unlocks the hall door lock, opens an electrical contact that monitors the door lock condition/position, and opens the door allowing passage of passengers to and from the interior of the elevator car. • An elevator contains a controller, that detects any faults or issues. If needed, the controller initiates emergency stops. In some newer elevator units, fault logs are generated by the controller.
	Failure scenario(s)		After reviewing the fault logs that were generated by the controller, it was determined that during the elevator travel to P2, the door clutch clipped the hall door lock at the third floor. This caused the controller to initiate an emergency stop.
	Facts and evidence		After reviewing the controller fault log, the fault log showed that the safety circuit opened and caused the controller to initiate an emergency stop,
	Causes and contributing factors		It is highly likely that due to the tight adjustment and the settling of the building, the car door clutch and hall door lock clearances became so tight that as the car passed the third floor, the car door clutch clipped the hall door lock causing the controller to initiate an emergency stop.



Door Lock Contact

Hall Door Pick Up Roller and Lock Assembly

Pick Up Roller Assembly



Hall Door Lock and Car Door Clutch