Incident Summary Report II-657117-2018 (#5386) (Final)

SUPPORTING INFORMATION	Incident Date		*January 28, 2018*
	Location		*Burnaby BC*
	Regulated industry sector		*Elevating Devices – Escalator or moving walkway*
	Impact – Injury	Qty injuries	*1*
		Injury description	*Technical Safety BC was notified that a girl was taken to the hospital by her parents with a bruised foot due to an entrapment on the down escalator.*
		Injury rating	*Minor*
	Impact – Damage	Damage description	*No damage to regulated equipment.*
		Damage rating	*None*
	Incident rating		*Minor*
	Incident overview		*Technical Safety BC was notified that a girl got her right boot stuck on the down escalator between the step and the stationary skirt panel.*
INVESTIGATION CONCLUSIONS	Site, system and components		Escalators have design features to prevent users from getting their foot wear and clothing articles from being entrapped. This entrapment mainly occurs between the moving step and stationary skirt panel on down escalators. The escalator steps are designed and required to have a maximum running clearance of 5mm between the step and stationary skirt panel. The skirt panels are designed to remain stiff and have adjustable brackets for support and to maintain the step to skirt running clearance. These brackets are typically spaced at 5 feet apart behind the visible skirt panels. The escalator skirt panels are also manufactured with an anti-friction coating to help reduce fiction and lower the chances of user's shoes and clothing articles from being entrapped.
	Failure scenario(s)		The user while riding the down escalator had their shoe in contact with the stationary skirt panel. The loaded step gap may have exceeded the 5mm maximum allowable distance between escalator step and skirt panel. The skirt stiffening brackets may not be installed or missing. The skirt panel coefficient of friction Index may be higher than the maximum allowable of 0.15 for an escalator without skirt deflectors. (brushes along the entire length of the escalator)
	Facts and evidence		Past the halfway point of the down escalator I found evidence of synthetic/rubber material on the skirt panel. This transfer of material continued for approximately 7 steps on the left skirt panel looking up from the bottom. The loaded step gap was greater than the allowable of 5mm. We recorded a discrepancy of 0.9 to 1mm.

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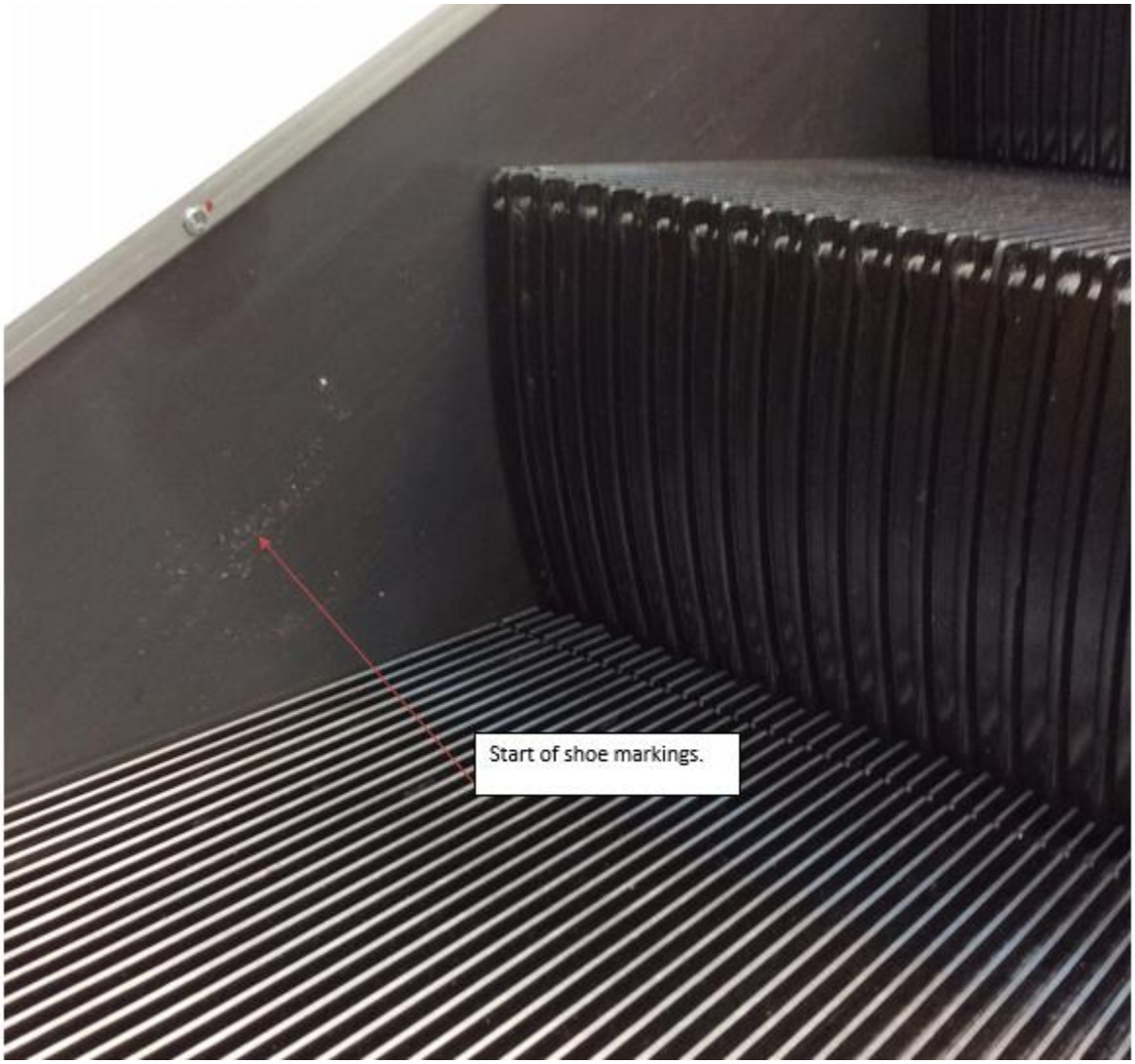
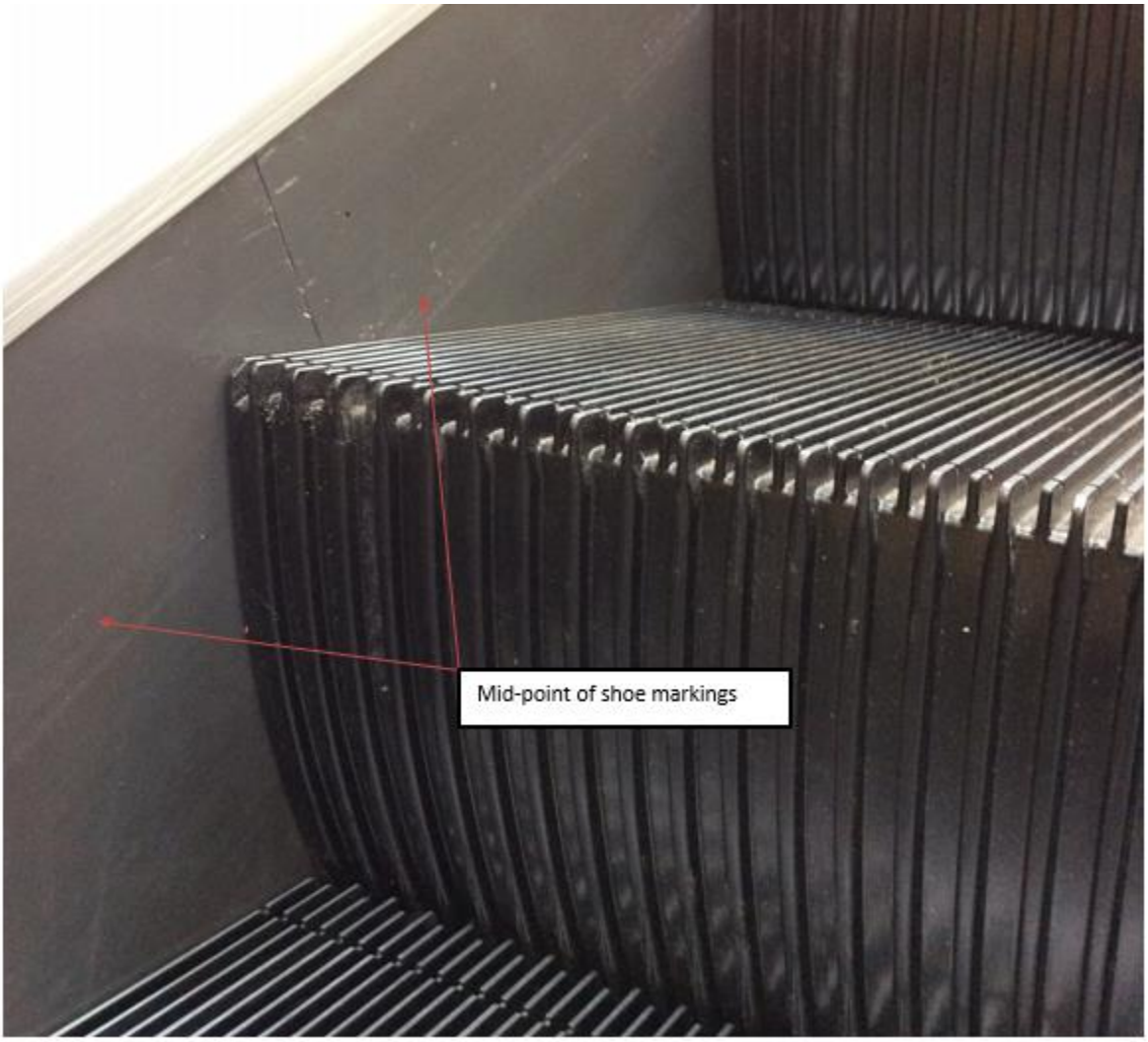
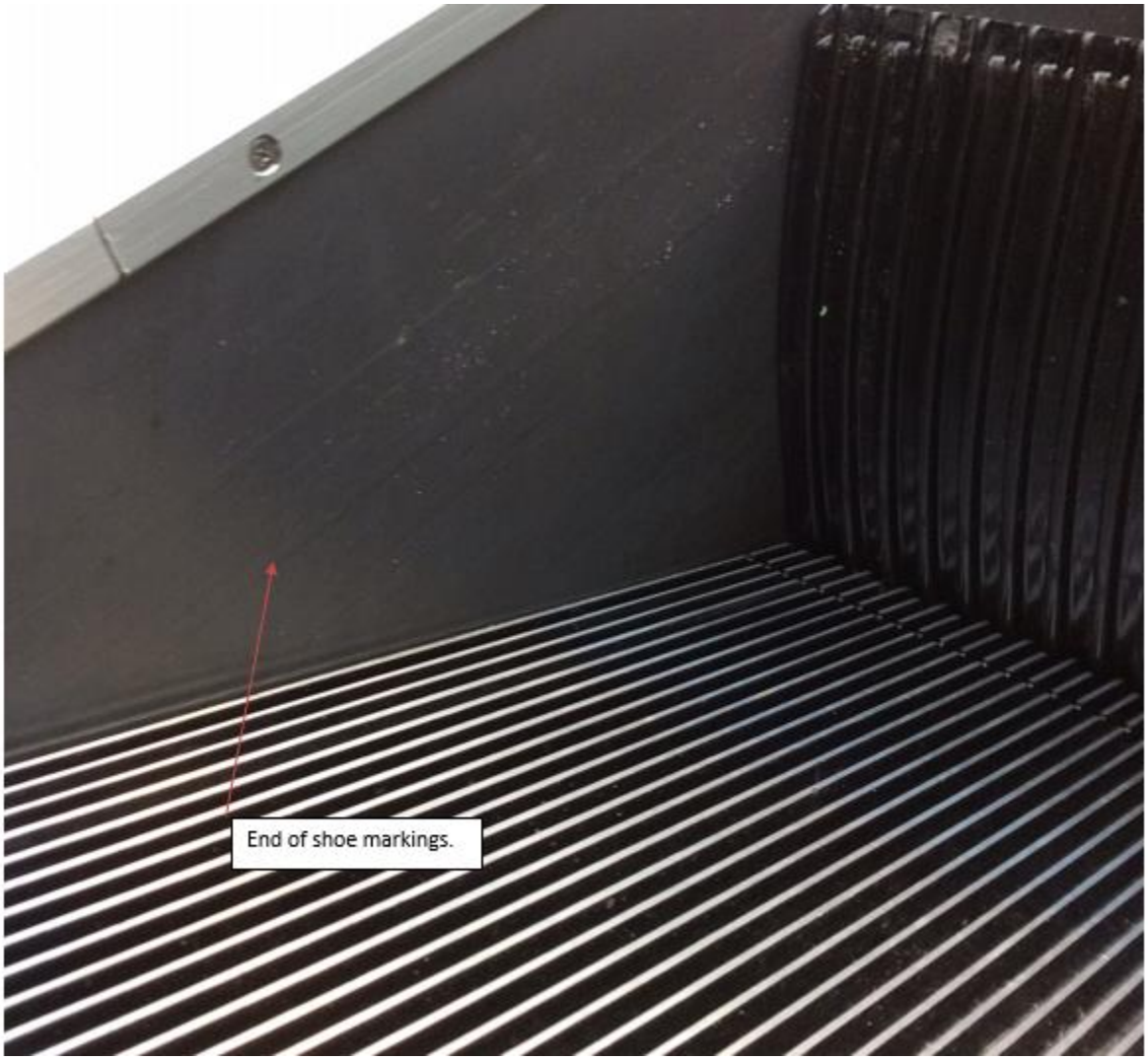
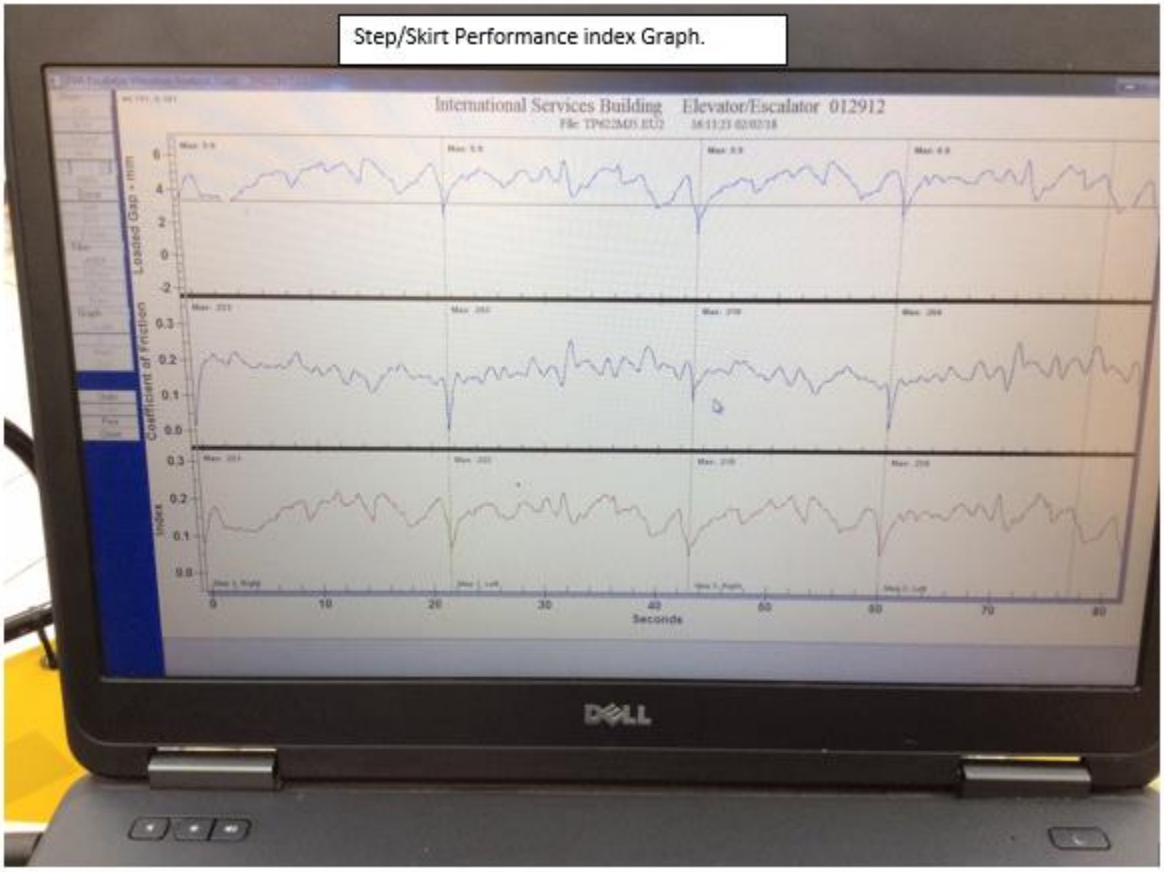
	The escalator skirt stiffening brackets are all in place. The Step/skirt performance index test showed the co-efficient of friction and Index are higher than allowed for escalators without skirt deflectors.
Causes and contributing factors	Likely that the interaction of the shoe with the skirt panel allowed the shoe to become entrapped. Contributing factor is that the step gap between the step and skirt panel exceeded maximum allowable distance. The step/skirt index performance test showed the co-efficient of friction was greater than allowable by code for escalators without skirt deflectors.

Photos or diagrams




Mid-point of shoe markings


End of shoe markings.


Step/Skirt Performance index Graph.
International Services Building Elevator/Escalator 012912
Loaded Gap - mm
Coefficient of Friction
Index
Seconds
DELL