

Incident Summary II-680863-2018 (7047)

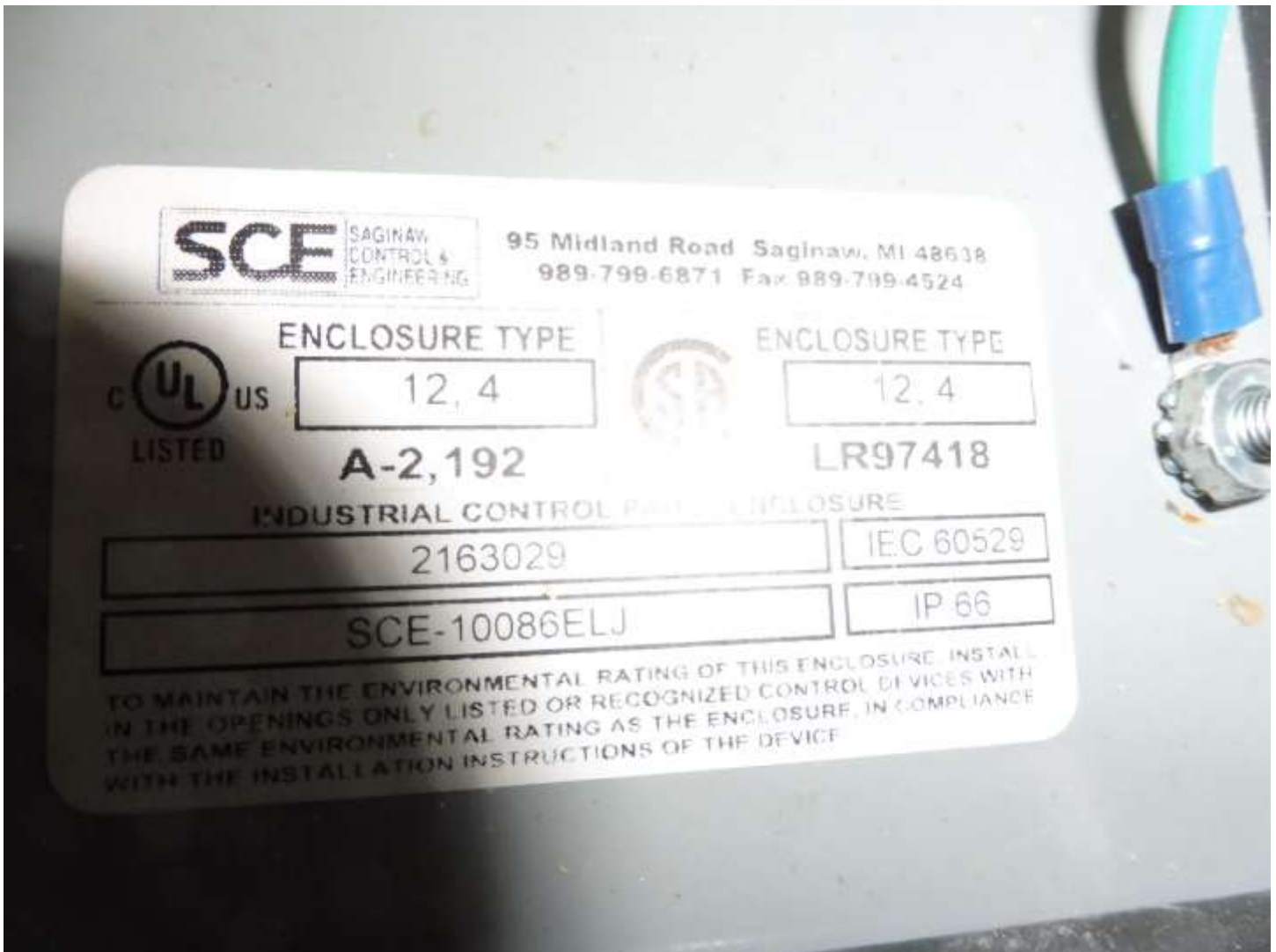
SUPPORTING INFORMATION	Incident Date	<i>May 3rd, 2018</i>	
	Location	<i>Prince George, BC</i>	
	Regulated industry sector	<i>Low Voltage Electrical System (30V to 750V)</i>	
	Impact	Qty injuries	<i>No injuries</i>
		Injury description	<i>N/A</i>
		Injury rating	<i>N/A</i>
	Damage	Damage description	<i>An appliance used within the car wash facility ignited nearby combustible materials. The ignited material damaged the adjacent equipment, affecting the operation of the car wash.</i>
		Damage rating	<i>Minor</i>
Incident rating	<i>Minor</i>		
Incident overview	<i>An electric water heater for the car wash was installed on a piece of plywood. After a year or so of operation the plywood the water heater was mounted to started on fire. The fire was discovered immediately and extinguished by an employee with a fire extinguisher. The water heater was damaged during the incident.</i>		
INVESTIGATION CONCLUSIONS	Site, system and components	<i>The electric water heater was one component in the functioning carwash. The electric water heater would heat up water as it flowed through the heater. The water heater had an outside metal case covering the insulation around the inner core. The water heater was mounted onto a combustible plywood surface. The hot outside surface was close to the combustible surface it was mounted on.</i>	
	Failure scenario(s)	<p>The electric water heater was found on the floor of the car wash equipment room. The heat shield around the outside of the water heater was separated from the water heater with most of the insulation missing. At the location where it had been mounted, the existing plywood was scorched and burnt. The plywood appeared to have the most damage right behind where the electric heater had been installed.</p> <p>In the manufactures instructions it was noted that there were no warnings or instructions on what type of surface this electric water heater should be installed onto. In discussions with the onsite electrician it was determined that at another car wash site the water heater was mounted directly on a non-combustible cinder block wall. The electrician was clear that these water heater get very hot on their outside surface.</p> <p>The regulated product was working normally. The failure was in how the product was originally installed.</p>	
	Facts and evidence	<i>The failure was not with the product itself but with the products accompanying installation instructions. There is no mention of what type of material the product should be mounted onto. For example (mount only on a non-combustible surface).</i>	
	Causes and contributing factors	<i>The amount of heat produced on the outside surface of the electric water heaters heat shield may have been sufficient to ignite the combustible plywood it was mounted to. The manufactures instruction manual for this water heater has no warnings or specific instruction detailing what type of surface the water heater should be mounted to.</i>	

A picture of the electric water heater
after the fire.





The location of the electric water heater at the time of the fire. The plywood it was mounted to started on fire.



The certification label for the enclosure and industrial control panel.