

Incident Summary #II-1056017-2020 (#19079) (FINAL)

SUPPORTING INFORMATION	Incident Date	April 26, 2020
	Location	Courtenay
	Regulated industry sector	Electrical - Low voltage electrical system (30V to 750V)
	Impact	Qty injuries
		0
		Injury description
	Damage	NA
		Injury rating
		None
INVESTIGATION CONCLUSIONS	Site, system and components	Damage description
		Electrical service panel fire
		Damage rating
	Incident overview	Minor
		On April 26, 2020 the owner of a dwelling went into his detached shop and found the main electrical panel on fire, as well as the plywood wall above the panel. The owner turned the main breaker off and used a fire extinguisher to put the fire out.
	Failure scenario(s)	
INVESTIGATION CONCLUSIONS	Facts and evidence	

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	<p>1st Electrical contractor, interview:</p> <ul style="list-style-type: none"> This contractor originally installed the 200A service panel and was called to perform the repair after the fire. He found the 30A breaker for the heater in the tripped position. He found both the buss and breaker melted where they make contact; and observed that it was a Siemens brand breaker installed in a Homeline brand panel. <p>2nd Electrical Contractor, Interview:</p> <ul style="list-style-type: none"> This contractor installed the shop wiring and breakers to the existing panel. He said he did install the 30A Siemens breaker for the heating circuit to the Homeline panel. <p>Safety Officer Remote Observation:</p> <ul style="list-style-type: none"> 200A panel destroyed inside 30A breaker melted where it contacts the panels buss Panel buss melted where it contacts the 30A breaker. Siemens label on breakers installed in Homeline panel. Documentation from the panel manufacturer (Schneider Electric) stating Siemens breakers are not approved for use in Homeline panels.
<p>Causes and contributing factors</p>	<p>The cause of this incident was very likely due to the overheating of the 4800W construction heater circuit, where the 30A breaker makes contact with the panels buss.</p> <p>It is very likely that because the 30A breaker installed was not approved for use in this panel, that the proper mechanical and electrical contact wasn't achieved. Although the heater had been installed for 6 years it was only used a few times; and therefore, probable that each time this substantial load was used, the electrical connection became worse until failure.</p>



Image 1 - Burnt panel and wood above. The 30A 2-pole breaker is top left



Image 2 - Burnt Panel with 30A breaker removed. Note melted buss top left.



Image 3 - Construction Heater – 4800W



Image 4 -Siemens label on breaker installed to Homeline panel