

Incident Summary #II-760614-2018 (#9226) (FINAL)

SUPPORTING INFORMATION	Incident Date	October 19, 2018	
	Location	Duncan	
	Regulated industry sector	Electrical - Low voltage electrical system (30V to 750V)	
	Impact	Qty injuries	0
		Injury description	N/A
		Injury rating	None
	Damage	Damage description	3 Phase 400 Amp load centre buss and associated over current devices disintegrated. Fire damage in and around electrical distribution panel. Smoke damage in electrical room.
		Damage rating	Major
	Incident rating	Major	
	Incident overview	A qualified individual working for a licensed electrical contractor was entering an armoured cable into an energized electrical panel when arcing and sparking occurred, causing an electrical fire in the load centre. The fire damaged the load centre and the wall and ceiling adjacent to the panel.	
INVESTIGATION CONCLUSIONS	Site, system and components	The system is a 120/208 Volt 3 Phase overhead service. The main disconnect is fused at 600 Amps. From a 600 Amp splitter parallel raceways enter in to a 3 Phase 400 Amp disconnect. This disconnect has 300 Amp fuses installed. Conductors from the disconnect enter a metering cabinet, conductors from the metering cabinet then terminate in the 3 Phase distribution load centre. The distribution load centre provides overcurrent protection for the branch circuits that are terminated in that panel.	
	Failure scenario(s)	<ul style="list-style-type: none"> - The energized panel did not have the cover installed at the time the incident occurred. - An armoured cable was being entered into the panel - An electrical short circuit occurred in the load centre creating an electrical arc and subsequent fire 	
	Facts and evidence	<p><u>Witness Statements:</u></p> <ul style="list-style-type: none"> - Utility provider received a trouble call at approximately 10:32 AM - Utility provider disconnected power at approximately 11:20 AM - Property owner stated he could hear what sounded like an arc welder for over a half hour - Armoured cable was being entered into the load centre - Electrical contractors employee tried to extinguish the fire with a fire extinguisher but, there was too much smoke and had to exit the electrical room 	

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	<p><u>Distribution load centre:</u></p> <ul style="list-style-type: none">- Panel cover was not installed- Energized at time of incident <p><u>400 Amp fused disconnect:</u></p> <ul style="list-style-type: none">- One of the protective devices, a 300 Amp fuse in the disconnect had opened due to excessive current.
Causes and contributing factors	<ul style="list-style-type: none">- It is highly likely that an electrical short circuit occurred while the armoured cable was being entered into the distribution panel- Panel cover was removed from an energized panel- Electrical work was being done on an energized distribution panel

Photos or diagrams (if necessary)



Photograph 1. Showing buss location



Photograph 2. Armoured cable that was being entered into load centre



Photograph 3. Meter cabinet location and associated conductors entering load centre