

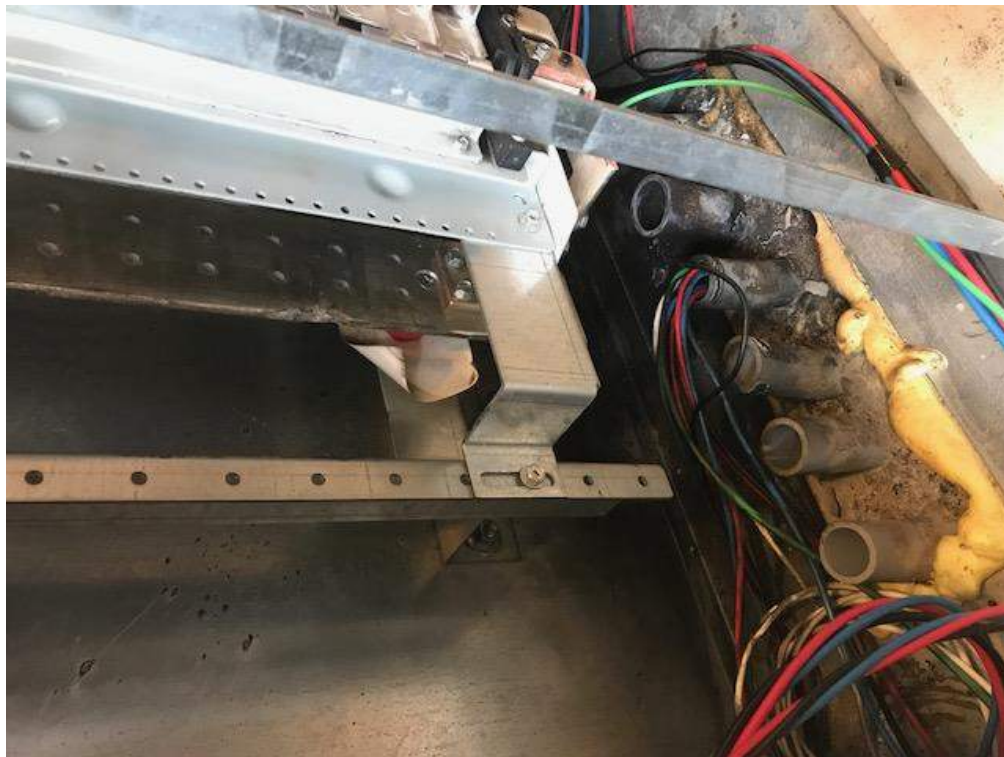
Incident Summary (Posse file 5623158)

SUPPORTING INFORMATION	Incident Date		<i>August 24, 2017</i>	
	Location		<i>Revelstoke</i>	
	Regulated industry sector		<i>Electrical- Low Voltage Electrical System (30-750 volts)</i>	
	Impact	Injury	Qty injuries	<i>none</i>
			Injury description	<i>none</i>
			Injury rating	<i>None</i>
	Damage	Damage description	<i>Damage to the internal buss as well as charring to the base of the enclosure and the internal side of the exterior cover</i>	
			Damage rating	<i>Moderate</i>
Incident rating		<i>Moderate</i>		
Incident overview		<i>Individual was installing a metal fish tape to pull new conductors/ cabling through and into the wrong 'empty' conduit when it entered into the bottom of an energized 600 volt 3-phase 4-wire (200 amp fed) Main Distribution unit and shorted from ground to 1 phase of the buss. Minor damage to the buss was noted.</i>		
INVESTIGATION CONCLUSIONS	Site, system and components		<ul style="list-style-type: none"> - <i>A 400 amp 347/600 volt site service provides power to the buildings industrial equipment, power and lighting system.</i> - <i>The fish tape is a very commonly used tool to assist contractors in the installation of conductors into conduit systems. It is used by initially pushing the fish tape through an empty conduit attaching wires at the opposite end and pulling them back through the conduit for power distribution</i> 	
	Failure scenario(s)		<i>A (newer) Electrical Journeyman was working alone while his supervisor left to pick up material and was in progress of installing a metal fish tape into an empty conduit that he believed to have been exiting the floor level 'beside' the existing energized electrical equipment. The fish tape was mistakenly placed in the wrong pipe and exited the pipe within the live energized panel enclosure instead of the destined conduit beside the panel</i>	
	Facts and evidence		<ul style="list-style-type: none"> - <i>An Eaton 400 amp 347/600 volt Main Distribution Center with 400 amp rated bussing and 25kA rated breakers- cover was in place during incident</i> - <i>No overcurrent devices tripped during incident</i> - <i>Multiple unmarked empty RPVC conduit system for future electrical run throughout located both inside and outside of the energized electrical power systems</i> - <i>Individual unfamiliar with buildings electrical system installed a metal fish tape into the wrong conduit that entered and shorted within an energized 347/600 volt MDC</i> - <i>Minor burn damage to bottom end of 1 buss (furthest from Main overcurrent device) noted</i> - <i>Any damaged conductors were replaced prior to site visit</i> 	

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<p>Causes and contributing factors</p>	<p>The fact that the young Journeyman Electrician was working alone in an industrial shop and was not familiar with the facilities electrical system, the installation of a metal fish tape into an energized panel created the short when contacting both the energized Buss and the bonded metal enclosure and a fault occurred, the damage to the Buss was minor however the energy produced within the enclosed equipment contained and prevented further damage or injuries from occurring.</p> <p>It is Highly Probable that the individual both failed to investigate and confirm the conduit was the correct one prior to proceeding with work and that by working alone the incident 'may' have been prevented by having a co-worker at the location through communications.</p>
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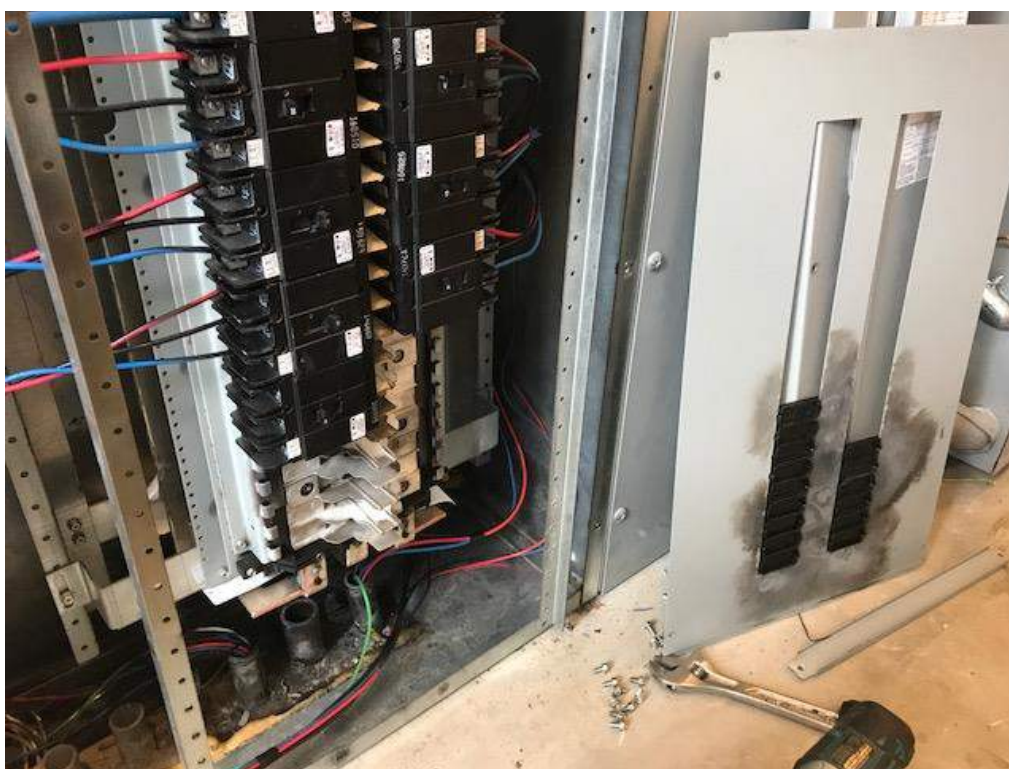
Photos or diagrams (if necessary)



Initial burn damage at time of incident within enclosure



Initial burn damage within enclosure



Opened MDC at time of incident



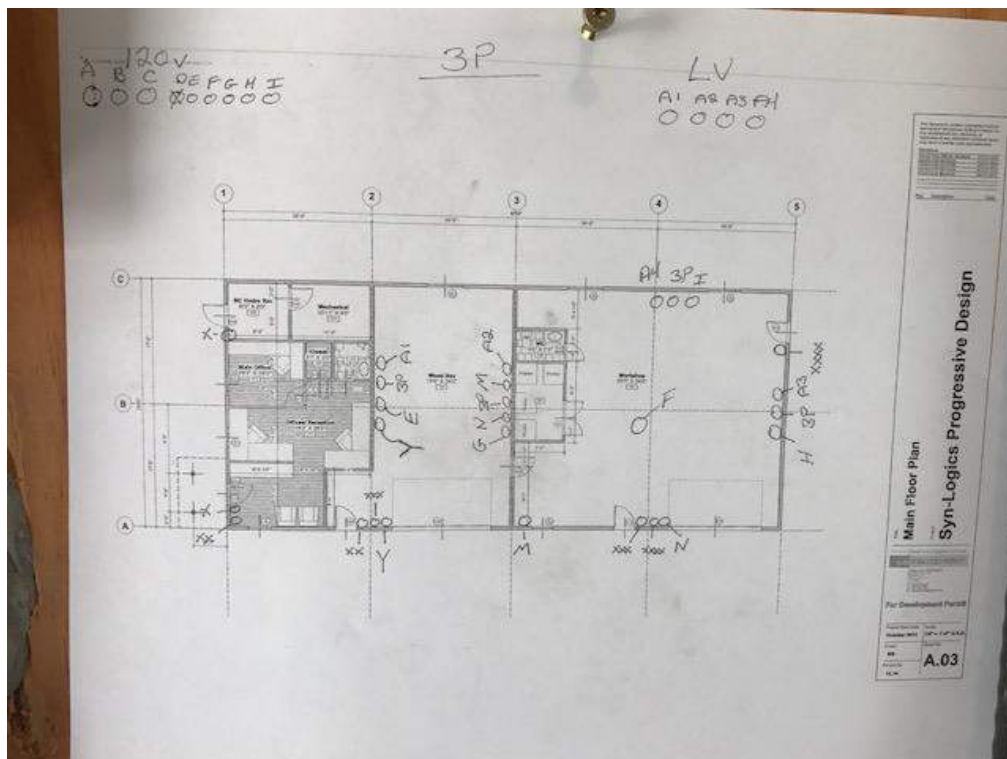
Extent of Buss damage- at load end of enclosure



Empty conduit system ORIGINAL TARGET



MDC after incident



Contractor floor plan layout given