

## Incident Summary #II-895972-2019 (#14925) (FINAL)

SUPPORTING INFORMATION	Incident Date		August 22, 2019	
	Location		West Kelowna	
	Regulated industry sector		Electrical - Low voltage electrical system (30V to 750V)	
	Impact	Injury	Qty injuries	1
			Injury description	Individual sustained minor burns to upper forearm; released from hospital same day with no further complications.
			Injury rating	Moderate
	Damage	Damage	Damage description	Twist lock electrical receptacle charred and melted.
			Damage rating	Minor
	Incident rating		Moderate	
Incident overview		A 480v 30Amp twist lock electrical plug and receptacle for a portable transfer pump failed upon connection injuring worker from arc flash and damaging the receptacle.		
INVESTIGATION CONCLUSIONS	Site, system and components		The twist lock receptacle enters base and twists to make the electrical connection, thus energizing the equipment.	
	Failure scenario(s)		An Employee washed down the area and plugged in a portable transfer pump into 480v 30amp attachment plug. The approved wet location twist lock receptacle was not sealed adequately and water entered equipment. Upon insertion an arc flash explosion occurred.	
	Facts and evidence		<p>The approved wet location twist lock receptacle was not reviewed for integrity and allowed water in.</p> <p>There was no procedure to ensure equipment was not impacted by wash down in the area: work procedure was developed after the incident.</p> <p>Photos show the damaged receptacle and the integrity of the wiring connections in the junction box.</p>	
	Causes and contributing factors		<p>It's likely that the aging wet location twist lock receptacle wasn't sealed correctly and allowed water to enter causing an arc flash when it was energised.</p> <p>The lack of a worker procedure may have been a contributing factor to the incident.</p>	



Photo 1: Damaged twist lock receptacle for portable equipment: 30A 480V



Photo 2: Fail point of receptacle





Photo 3: Original installation

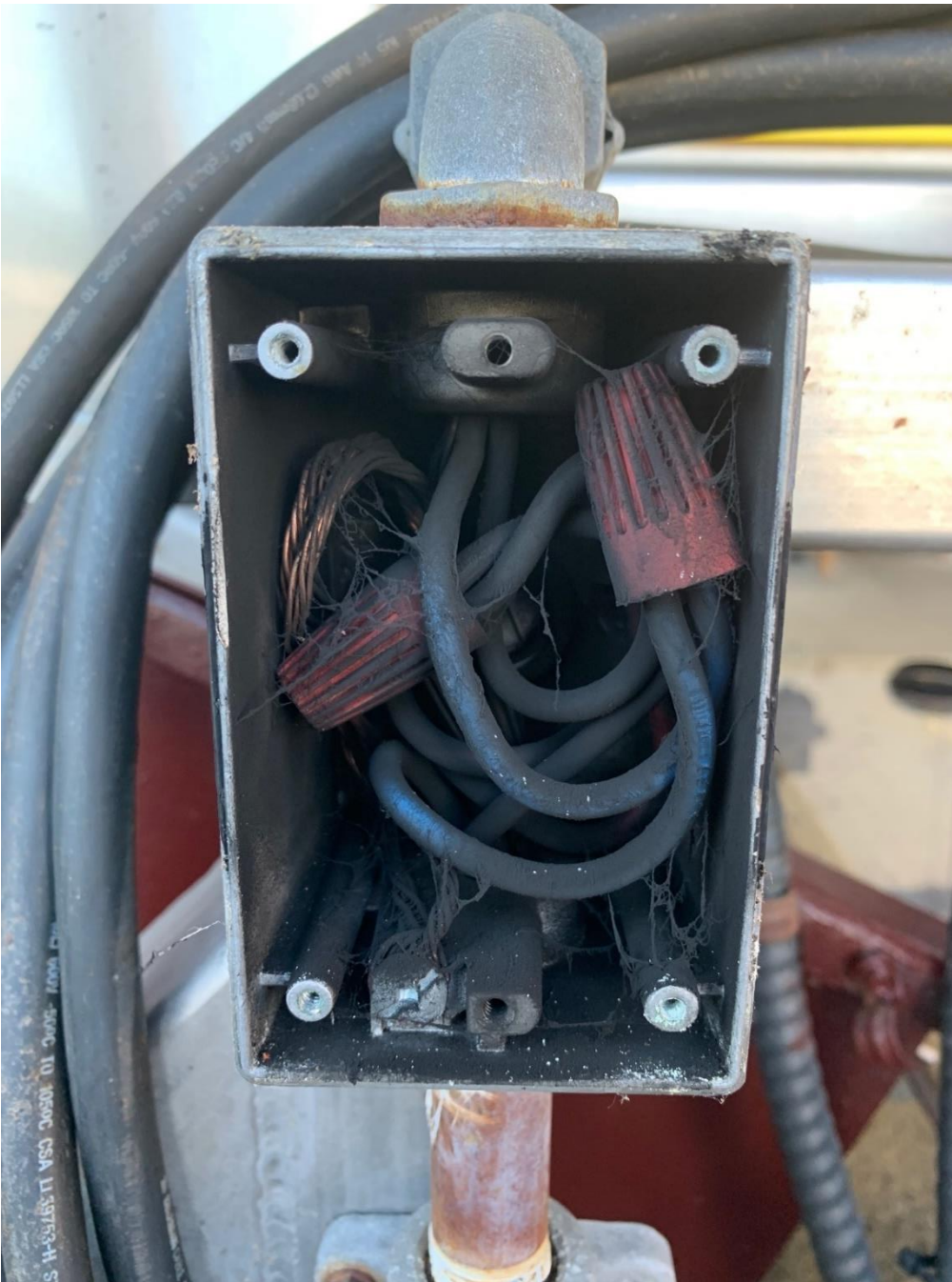


Photo 4: Interior JB shows integrity



