

PTW Safety Checklist No. 32



LIVE ELECTRICAL WORK ON AC AND DC SYSTEMS

Other Checklists that may be relevant:		44 , 18
Permit Number:		Date:
Rev 3.1	Issue Date: 29/11/2022	Authorised By: PSM

CAUTION:

- 1 **Arc Flash Hazards and Safe Working Distances,**
Arcing faults have the potential to cause serious injury or death to electrical workers.
When an arcing fault occurs a very large amount of energy can be released in a very short period.
Metal conductor parts can vaporise, allowing hot metal to cause severe burns to workers either from direct exposure to the metal vapour or from ignition of clothing.
The intense energy release can create a loud explosion and tremendous pressure, which has the potential to rupture eardrums, collapse lungs and violently knock the worker backwards.
- 2 **Use the on-site Arc Flash Matrix to determine the safe working distances and the appropriate Arc Flash Category PPE required to be worn for the work activity.**
[PPE Requirements for Work in Proximity to Electrical Equipment SOP.pdf](#)
- 3 **This checklist 32, is not required to test equipment to determine its energized state (live or dead) or for working on low voltage 24VDC instrument loops.**
People carrying out this activity shall be familiar with the following documents:
 - [PPE Requirements for Work in Proximity to Electrical Equipment SOP.pdf](#)
 - [Electrical Safety Rules Manual.pdf](#)

PRIOR TO PERMIT ISSUE:

	Y	N	N/A
4 Confirm that work cannot be done with equipment isolated i.e., work can only be carried out with the equipment energized.			
• De-energising will introduce additional or increased hazards	<input type="checkbox"/>		<input type="checkbox"/>
• De-energising is NOT feasible due to equipment design, nature of the work being performed or operational limitations	<input type="checkbox"/>		<input type="checkbox"/>
5 Tools are suitably insulated and in sound condition and test equipment has a current test date.	<input type="checkbox"/>		
6 If working from a ladder, the ladder MUST be non-conductive i.e., fibreglass construction	<input type="checkbox"/>		<input type="checkbox"/>
7 Arc Flash Hazard Category Level established, and PPE selected. Circle applicable Hazard Category No.	<input type="checkbox"/>		
<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4			

PPE Selected: _____

Y N NA

- 8 A dedicated watch person with radio, and current first aid training is positioned outside the arc flash boundary and is able to electrically isolate the equipment involved, raise the alarm and render assistance.

Watch Person Name: _____

- 9 Electrical / instrument interlocks or other potential sources of supply on live equipment have been reviewed and any additional risks created by these are understood and managed.
- 10 A recovery plan has been developed to immediately isolate the power source then safely recover any person that may have been electrocuted during the live work activity.
- 11 All recovery plans MUST clearly identify the following
- power isolation location,
 - communication method(s)
 - location of a ready for use AED. (AED should ideally be located at the live work activity location if practicable)
- 12 Confirm the PI has approved the recovery plan
- 13 The work party and safety watch person have read and understood the recovery plan

PRIOR TO COMMENCING TASK:

Y N N/A

- 14 Pre-use inspection of Arc Flash PPE is completed.
- 15 All mitigations as detailed in the Arc Flash matrix are in place.
- 16 If equipment is equipped with an arc flash relay, the relay has been inspected to confirm that it is in a healthy state.
- 17 Correct type of fire extinguisher is fully functional and available at site.
- 18 Consider standing on a rubber mat when doing the work.
- 19 Remove metal jewellery and watches to eliminate the shorting out risk.

ON COMPLETION OF TASK:

- 20 Ensure that any covers shrouds or other protection devices removed during the live work activity are replaced and secured.
- 21 Return all Arc Flash PPE and related Recovery plan equipment back to its normal storage location.