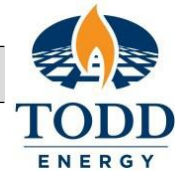


# PTW Safety Checklist No. 32



## LIVE ELECTRICAL WORK ON AC AND DC SYSTEMS

Other Checklists that may be relevant:		<a href="#">44</a> , <a href="#">18</a> , <a href="#">52</a>
Permit Number:		Date:
Rev 2.0	Issue Date: 13/12/2017	Authorised By: PSM

### PREPARATION:

**NOTE: This checklist is not required to test equipment to determine its energized state (live or dead).**

People carrying out this activity shall be familiar with the following documents:

[Electrical Safety Rules](#)

[STA-01.22](#) PPE Requirements for work in proximity to Electrical Equipment

[STA-01.36](#) Work on Live Electrical Equipment and Circuits

### PRIOR TO PERMIT ISSUE:

- |   | Y  | N | N/A                      |   |   |   |   |
|---|--|---|--------------------------|---|---|---|---|
| 1 Confirm that work cannot be done with equipment isolated ie work can only be done under live conditions.  | <input type="checkbox"/>   |   |                          |   |   |   |   |
| 2 Tools are suitably insulated and in sound condition and test equipment has a current test date.   | <input type="checkbox"/>   |   |                          |   |   |   |   |
| 3 If working from a ladder, is the ladder non conductive ie fiberglass construction?  | <input type="checkbox"/>   |   | <input type="checkbox"/> |   |   |   |   |
| 4 Arc Flash Hazard Category Level established and PPE selected. Circle applicable Hazard Category No.   | <table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> |   |                          | 1 | 2 | 3 | 4 |
| 1   | 2  | 3 | 4                        |   |   |   |   |
| 5 A dedicated watchman with radio, current first and training is positioned outside the arc flash boundary and is able to electrically isolate the equipment involved.<br>Name: _____ | <input type="checkbox"/>   |   |                          |   |   |   |   |
| 6 Electrical / instrument interlocks or other potential sources of supply on live equipment have been reviewed and understood.  | <input type="checkbox"/>   |   | <input type="checkbox"/> |   |   |   |   |

### PRIOR TO COMMENCING TASK:

- |   |                          |  |                          |
|---|--------------------------|--|--------------------------|
| 7 Pre-use inspection of Arc Flash PPE completed.                                      | <input type="checkbox"/> |  |                          |
| 8 Correct type of fire extinguisher is available at wellsite.                         | <input type="checkbox"/> |  |                          |
| 9 Consider standing on a rubber mat and the use of rubber gloves when doing the work. | <input type="checkbox"/> |  | <input type="checkbox"/> |
| 10 Remove metal jewellery and watches etc.  | <input type="checkbox"/> |  |                          |

## **Arcing Fault Hazards**

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 of time. 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.

## **Safe Working Distances**

It is possible to determine the flash protection boundary distance from the live bus bars or other exposed conductors – taking into account the fault level and time required to clear the fault. If a worker is located inside the boundary and his skin is exposed to an arcing fault, the burns produced may not be curable.

It is important to ensure workers do not operate within the boundary unless approved protection is worn. Examples include head, face, neck, chin, eye, body and extremity protection. The flash protection boundary distance needs to be reassessed if the upstream protection setting is changed, or if the system changes affect the fault level.