



## 400V Arc Over Event – Missing Busbar Fuse

### WHAT HAPPENED?

- Following commissioning of a new 400V LVAC Board the board HMI screen wasn't working which was proven to be working in pre-livening checks.
- To investigate, the control cabinet was opened and a suspect fuse was inspected which revealed a loose wire that was close to touching the earth. A MCB was switched off to isolate the loose wire.
- A test was carried out to prove that the loose wire was not live. This action dislodged the wire which happened to be not isolated and led to a phase-to-earth fault resulting in a flashover which vaporised a section of wire.
- No injuries occurred as all quality and safety procedures were followed.



*Affected controls cabinet*

### ACTION TAKEN

- The Switchboard Manufacturer has undertaken a thorough investigation and implemented procedures to prevent future incidents like this from occurring.
- The importance of taking 5 has been re-iterated to Ventia staff

### ROOT CAUSE

- The wire was disconnected by the Switchboard Manufacturer during Factory Acceptance Tests and not securely reinstalled leading to an intermittent connection.
- A fuse was not installed by the manufacturer on a 1.5 mm<sup>2</sup> supply wire leaving it protected only by the main MCB.

### LEARNINGS/RECOMMENDATIONS

#### Recommendations:

- Review circuit diagrams for any wiring that might be connected directly to the busbar and where feasible carry out visual checks to confirm that all fuses have been installed.
- Take 5 to ensure the correct isolations are taken.

#### Learnings:

- Wearing appropriate PPE prevented any injuries.

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