



Unexplained tripping of MAN NMA 1 Circuit

WHAT HAPPENED?

Project staff were installing new wiring in the MAN relay room for an upcoming SMS project. They were working in the line protection cabinet for the MAN_NMA_1 circuit (P9), which was in service.

Staff had removed trunking covers and cable ties and were installing new wiring as part of pre-outage work.

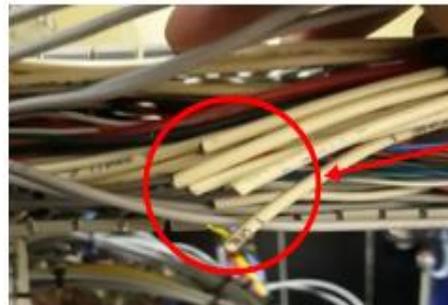
While they were working in the cabinet, MAN CB272 tripped (only the MAN end tripped and there were no Protection Flags). The staff working at MAN were not aware the CB had tripped until notified by NGOC.

CB272 was inspected and closed by NGOC and the circuit put back into service. 20 minutes later CB272 tripped unexpectedly again. The circuit was taken out of service and an on-site investigation commenced.

Wiring in the trunking of P9 was found to have been previously stripped back and left exposed (see red circle in the top photo). Several crimp terminations were also found to not be heat shrunk and multiple spare cores were not capped (see the bottom photo).



Wires with exposed live copper, and terminations not heat shrunk down



Spare wires not capped

IMMEDIATE ACTION TAKEN

- All work on site was stopped and the MAN_NMA_1 circuit was removed from service.
- Panel 9 (MAN_NMA_1) and CB272 wiring and terminations were checked, with numerous wiring issues identified, all hidden within the trunking of the panel.
- The exposed cores/wires were insulated and the MAN_NMA_1 circuit and CB272 returned to service after functional testing.

LEARNINGS

- Never leave wiring in an exposed or unsafe state
- Staff working in in-service cabinets need to be aware that previous poor work practices may have left hidden defects, including hazardous wiring.
- Work can only be carried out in an in-service cabinet under a Work Authority. A risk assessment must be undertaken and consider the risk of disturbing wiring/connections and be mitigated accordingly.

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