Case Study – Hitachi Local Options

Environmental factors take their toll on the Local Electrical Options, resulting in machine down downtime for the same faults.

Problem - Excessive wear and corrosion from years of dust ingress, heat and general wear and tear affecting machine availability

Through our on-site experience, we have found local option electrics to be the common cause of most electrical breakdowns. Site auto electricians are always performing some sort of repair to critical machine system, such as auxiliary lighting, which all have suffered from year of exposure to mining conditions.

With environmental conditions and parts availability constraint, repairs will often not be to the standard needed to stop the fault from re-occurring, **reducing machine availability**.

Solution - Replace with new options cabinet control and wiring harnesses

Utilizing the existing placement of option components and perform the system change out during a scheduled maintenance shutdown. Just some of the upgrades below;

- 80amp relays for the auxiliary lighting and signalling horn compressor
- More than adequate wiring size increase on these same circuits
- XLPE tinned copper cabling, better heat and current ratings is used in the cabinet and harnessing
- Wire identification tags and printed wire identification
- Nylon yarn harness braiding - better abrasion resistance, higher temperature tolerance & designed not to hold in the dirt or moisture

Outcome – Increased Availability

Coupled with the critical component upgrades in the cabinet and wiring harness to suit, along with all components being renewed has led to a drop in downtime caused by electrical faults. Not to mentions the ability to quickly diagnose faults if they occur with the added labelling and supporting documentation