

Making Battery Swapping Easier and More Reliable

Objective

Make maneuvering the charging cables and coolant lines easier for operators, while reducing the likelihood of damage and dirt ingress into the coolant lines during battery swapping.

“It’s a game changer in keeping the cables and everything in good condition and made it a lot easier for the operators”

Auto-BEV Technician

Justification

The charging cables together with the battery coolant lines are heavy and hard to maneuver around the charging bay, potentially leading to strain injuries and poor ergonomics.

The cables were often left on the charging bay floor, where they pick up dust and dirt which can find its way into the coolant lines negatively affecting the cooling systems’ reliability.

Implementation

From an information sharing session with another early-adopter mine, the concept for a wall-mounted jib arm assembly was identified to help with charging cable management.

The on-site BEV maintenance technicians developed a design for the jib arms and worked with management to have them installed in the charging bays.

Progress to Date

The jib arms make swapping the batteries physically easier for the vehicle operators, maintenance technicians and battery bay attendants.

The flexible jib arm design works well with the Y-configuration of the charging bays, allowing the cables to swing either way to service whichever battery that’s charging.

The jib arms keep the ends of the cables in good condition, with the side benefit of reduced cleaning and maintenance.

