

Emergency Rewind & Overhaul 4.5kW Electric Motor

Quartzelec delivered rapid emergency rewind and overhaul of a 4.5kW motor, restoring production within three days, through expert engineering, teamwork, and round-the-clock effort at Sheffield facility for customer operations continuity.

MANUFACTURING | SHEFFIELD

Our Customer's Challenge

The client was experiencing significant production disruption following the failure of a 4.5kW motor, which required a full rewind, structural repair due to a broken foot, and housing refurbishment. With downtime directly impacting operations and no immediate replacement motor available due to extended lead times, they needed a fast, reliable solution within a very tight timeframe to restore functionality and prevent further losses. Quartzelec was chosen for its proven ability to respond rapidly to critical situations, deliver high-quality rewinds under pressure, and provide a comprehensive in-house service that minimised delays and ensured the asset could be returned to service as quickly as possible.

The Quartzelec Solution

Quartzelec immediately mobilised its Sheffield workshop to manage the urgent repair, collecting the motor from site and carrying out as-received electrical testing before a full strip-down to component level.

Detailed mechanical measurements and stator winding data were captured, followed by a controlled burnout process to remove the failed windings. A new set of coils was manufactured and installed, with the stator rewound, fitted with new leads, then varnished and baked to ensure durability.

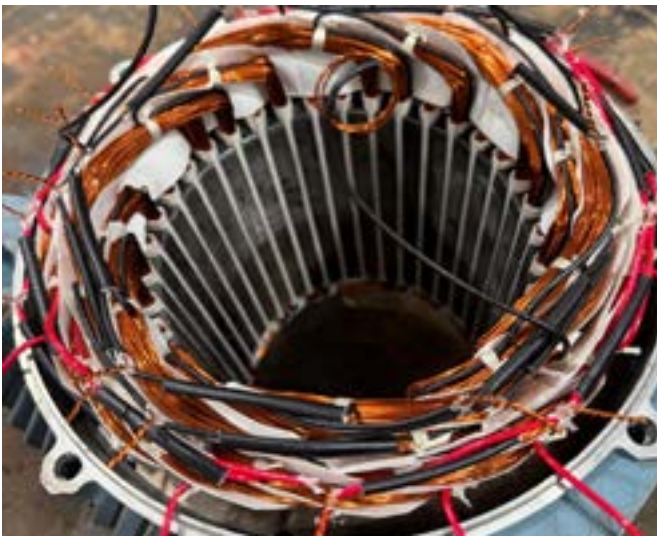
Concurrently, mechanical refurbishment included polishing a tight NDE bearing housing, fitting new bearings and seals, and completing a precision aluminium weld repair to the damaged foot.

All components were prepared and finished with a high-quality 2K paint coating before reassembly, and the motor underwent an off-load test run to verify performance. Working extended hours through the weekend to meet the critical timeframe, and supported by highly responsive suppliers, the team completed the overhaul and returned the motor to site within three working days.



Key Benefits

- **Minimised downtime:** Rapid turnaround ensured production was restored within three working days, significantly reducing operational and financial impact.
- **Consistent quality under pressure:** Emergency works were delivered to Quartzelec's high standards, with the motor returned in "as new" condition.
- **Strong teamwork and collaboration:** Seamless coordination between engineers, workshop management, suppliers, and logistics enabled delivery within a tight timeframe.
- **Enhanced customer confidence:** Successful delivery strengthened client relationships, demonstrating reliability, responsiveness, and capability in critical situations.



Rapid
Turnaround

Emergency
Response

Quality
Workmanship