

CASE STUDY



CUSTOMER

Unipart

SECTOR

Rail

SERVICE

AC & DC Traction
Motors Overhaul
& Repair

G310 Traction Motor Overhaul

Houghton International were awarded the contract from Unipart for the overhauling of G310 traction motors from Merseyrail, dating back to 2005.

At the time, Merseyrail were the worst performing TOC in the UK with a >20% in-service failure rate.

This was the first major rail contract for Houghton International.

WHY HOUGHTON INTERNATIONAL?

- **HiTRAX™ Traction Motor Life Extension Insulation System**
- **Direct access to engineering support and technical expertise**
- **Culture of open communication and collaborative working**

www.houghton-international.com



Houghton International
Electro mechanical innovation

THE SOLUTION

Through open, constructive communication with both Unipart and Merseyrail, Houghton International was able to identify ongoing issues and investigated how best to solve them.

Houghton International immediately added value by making small initial changes to the specification and introducing the HiTRAX™ coil insulation system, designed specifically for rail traction motors. HiTRAX™ combines insulation materials that have the greatest dielectric durability throughout the wide temperature range traction motors are exposed to in their life cycle, with the highest specification VPI resins and stringent process control, tested to extremes. In addition, all coils were manufactured in-house by Houghton International, giving full control over the process and ensuring quality standards are maintained.

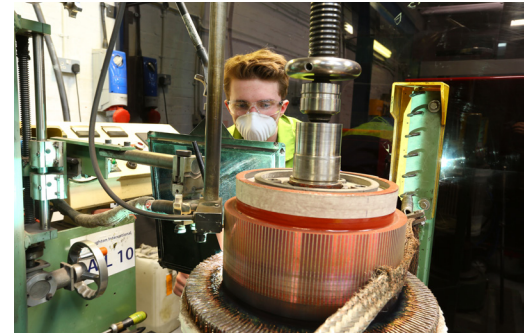
The standard specification for the motors required 57 checks to be conducted, but Houghton International carried out 157 checks, taking a more thorough approach. As a result, the lifespan of the traction motors were significantly extended.

THE RESULT

The quality of Houghton International's overhaul is clearly evident as Merseyrail's in-service failure rate reduced from over 20% to under 0.02%. This has helped Merseyrail achieve average Public Performance Measure (PPM) results of over 96%, indicating they are amongst the best performing train operators in the UK.

In over 10 years of working together, a positive and collaborative relationship has been forged, an excellent example of a repairer, maintenance provider and end user working together. This has enabled Houghton International to grow significantly and expand their rail services division, and thus providing the opportunity to innovate several times. With an open, collaborative attitude, a culture of joint learning has provided benefits to Unipart, Merseyrail and Houghton International.

Houghton International have now handled around 1500 GEC G310 traction motor repairs, ranging from standard overhauls to full rewinds, and averaging 12 scheduled repairs per month as well as additional in-service failures. With an on-time delivery rate of 100% since the contract began, Houghton International will continue to service the motors through to the end of their lifespan, providing maintenance and overhaul services until 2021.



I would recommend using Houghton International for any type of electric motor reconditioning."

Phil Locke, Fleet Procurement Manager, Merseyrail

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