



Creating a Re-usable Product Kitting solution

The Challenge

Kitting of parts for maintenance operations is a proven way of increasing efficiencies in the Supply Chain in the rail industry and has been an integral part of Unipart Rail's business for many years. For the engine common bloc overhaul of thirty four Class 373 vehicles Eurostar required a solution for the supply of materials that would reduce the time taken to complete the overhaul operation, reduce procurement activities and optimise storage of the components, as well as having minimal environmental impact.

The common bloc is part of a major overhaul for the Eurostar fleets. A seamless supply of materials operations was required to ensure the overhaul delivery was kept on schedule.

The Solution

Both parties collaborated to design the kit of parts and the approach to management of the supply chain from source to line side. This resulted in a seamless supply of materials helping ensure that the delivery of vehicles was kept on schedule. The kitting system has re-usable packaging enabling one kit to be on the customer site, whilst the other being re-filled ready for shipment. In addition Unipart Rail supply of all components to Eurostar's specification.

The overhaul of the common bloc engine refurbishment requires 68 components, totalling over 500 individual items. Containers are colour coded while numbering of the components and work sequences on depot work instructions, paperwork and packaging allows operators to correctly locate the parts required.

The kit of components are packaged on a moulded plastic pallet with integral wheels to allow easy movement around depot without the need for forklifts. The packaging is used to store components in the depot during the overhaul and is then returned to Unipart Rail to be re-used for the next vehicle.

By working in close partnership with the Eurostar project team to understand their overhaul procedure and depot functionality, Unipart Rail used Lean and creative problem solving techniques to develop the kitting solution.

The Result

The use of the re-useable kitting system enables the components to be located next to the area of the train where they are required, significantly reducing the time taken to complete the overhaul operation.

Further advantages of this kitting solution are a reduction in procurement activity requiring only one order to be placed by the customer, as well as the optimisation of storage and subsequent decanting of individual components in the client's stores. Components can be 'checked off' quickly upon delivery and the method of storage offers improved protection of all components whilst in the depot.

The operational improvements delivered via the new kitting process are crucial as the overhaul of each vehicle needs to be completed in five weeks. Over the course of the contract, Eurostar has increased the number of components that have been supplied by Unipart Rail to harness the benefits of the re-useable kitting solution and further increase operational efficiencies.

Andrew Battison, Project Engineer at Eurostar, said, "Unipart had such a positive attitude to the project. I am extremely impressed with the solution provided and Unipart's drive and ability to solve some of our parts issues."

From an environmental perspective there is a significant reduction in the amount of packaging that is used to protect the components in transit and any waste packaging can be recycled easily by the client. The utilisation of re-useable storage crates and moulded pallets that are transported between Eurostar and Unipart Rail maintains a minimal use of outer packaging and transport movements.



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