

PROJECT PROFILE

HST trailer cars



Analysis

Client: CrossCountry Trains

Contract scope: Refurbishment of 40 Mk3 HST trailer cars



TURNING REDUNDANT COACHES INTO MODERN HIGH SPEED TRAINS

A challenging, multi-faceted project that drew on a wide range of Wabtec resources

Whilst Wabtec has considerable experience of refurbishing HST trailer cars, this project for CrossCountry Trains threw up new challenges that tested our ability to resolve technical problems in a resourceful, inventive way.

The task was to create five rakes of eight HST trailer cars from twenty one Mk3 locomotive-hauled coaches and nineteen existing HST trailers.

Incompatible electrical systems

Problem one – the Mk3 coaches used motor/alternator sets powered from the 1000volt DC train supply, whereas the HST trailer car systems were powered from the cars' 415 volt, 3 phase supply.

After an extensive review of all previous Mk3 conversions, we concluded that the coaches needed a modern electrical system based on static converters in order to achieve the reliability required. As a result of this review, the following work was undertaken.

- > Existing motor/alternator sets and battery charging equipment were replaced by new static converters
- > The existing control system wiring was replaced
- > The existing jumpers were replaced
- > The air conditioning modules were replaced with new re-engineered modules
- > In the catering cars a new static converter was provided to power the kitchen equipment



New Ceiling Panels, Lighting Raft and Luggage Racks

Interior refurbishment

Working with CrossCountry's interior design team, we created a light, airy, modern feel to the interiors. Work undertaken included new ceiling panels, new overhead luggage racks, a new colour scheme, refinished interior panels and bulkheads, new dado panels and new seating following an airline-style layout.

The refurbishment also included the installation of a wheelchair accessible toilet module.

Whilst the conversion and refurbishment work was being undertaken, we took the opportunity to address any structural corrosion found on the vehicles and to replace bodyside skirts. We also carried out C4D and C6 heavy maintenance work and reliability modifications.



New Wheelchair Space with Call for Aid and Power Sockets



Refinished Vestibule Area



New Sculptured Seats

HIGHLY COMMENDED

Wabtec's and CrossCountry's work on this project was jointly submitted to the Eversholt Rail Business Awards 2009. The project was Highly Commended in the Rolling Stock Excellence of the Year category.



New Catering Area

- > Electrical modifications
- > New colour scheme
- > New ceiling panels, overhead luggage racks, lighting rafts and dado rails
- > Refinished interior panels and bulkheads
- > New floor coverings
- > New seating and tables, new LED reading lights, new window curtains
- > New 240 volt power sockets at all seating positions
- > Existing toilets refinished, new fully RVAR compliant universal access toilets installed
- > New wheelchair spaces created complete with 'Call for Aid' devices
- > New catering areas
- > Corrosion repairs, heavy maintenance and reliability modifications including installation of Wabtec re-engineered air conditioning modules
- > Re-painting and re-livery

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