



Bombardier Alstom Crewe: Overhead Crane Install

The Challenge

To replace an aged overhead crane at Alstom Crewe for a more efficient and safer lifting process.

The Solution

Street Cranexpress installed a new crane which was prepared at ground level by loading it onto the axle stand and using the overhead to line up the end carriages. Once lined up, spring pins were installed for alignment and bolts were installed to the correct torque specification. Long travel motors were then installed to the end carriage and copper slip assembly grease applied onto the pinions for seizing and corrosion prevention.



New crane being prepared at ground level

Preparing to remove the aged overhead crane

- We set the midsection of the end carriages on packers before we removed all but four bolts in the fish plates to split the beams.
- Then some wooden walkway planks were removed to allow access for slinging.
- The festoon cable was disconnected and removed from the crab.



Splitting the beams

Lowering the crab unit

- The crab unit weighed 1.1t
- Before lowering we had to sling the crab unit to ensure safe handling and lowering
- The crane was then split into two and the main beam moved to the other side of the roof tie bar to be lifted.



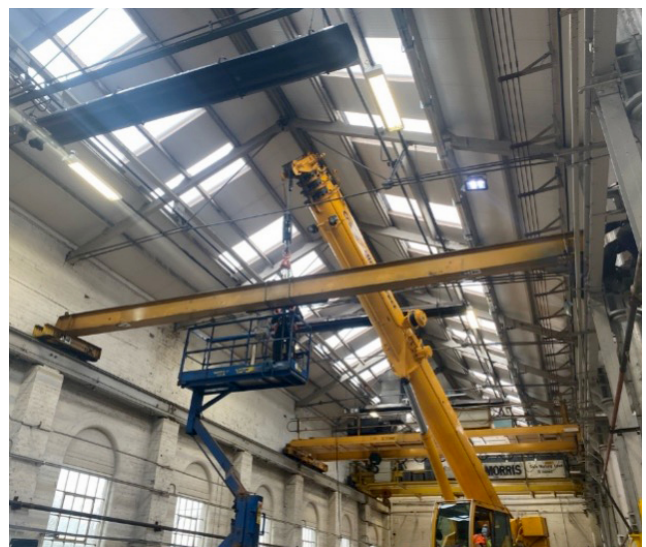
Removing the crab unit

Lowering the aged overhead crane

- The main beam was slung, and hand lines attached to each end for better control of the crane
- The crane was then lifted slightly to check it was level
- This was done four times to ensure it was correct
- When the crane was finally off the rail, it was safely lowered using the hand line to control the crane.
- To lower the auxiliary beam, we used the same process



Lowering the main beam



Lowering the auxiliary beam

Installing the new overhead crane

- A mobile crane was used to pick up the new overhead crane
- It was slung in order to balance with the hoist on the beam
- Two hand lines were then attached, and the crane lifted up
- Slewing the crane round to the gantry rail was done using the hand lines and then set on the tracks



Installing the new overhead crane

Setting the Pendant Cable

- The pendant cable was set at the correct height
- Collector arms and collectors were then added to the crane



Adding collector arms to the overhead crane

Proof load testing

- The next stage of the process was to unload the test weights to be picked up by the crane
- The crane was proof loaded, and the load limiter device was set
- This was to ensure lifting equipment is performing according to required standard



Proof load testing

Loading for Recycling

- The main beam, auxiliary beam and crab unit was finally loaded onto two trailers for recycling

