



## **Bombardier Transportation: Ilford Extraction Fan**

### **The Challenge**

Bombardier Transportation called upon the skill and expertise of Street Cranexpress engineers to remove and replace a damaged diesel extraction fan unit in their factory depot. Bombardier is a global leader in the transportation industry and the extraction fan was housed at one of their depot sites in Ilford London.

### **The Solution**

The extraction fan had to be removed quickly to ensure no further disruption to the depot operations. A considerable amount of scaffolding was required for the task which Street Cranexpress supplied. Bombardier trusted Street Cranexpress to carry out this task and they ensured the extraction fan was put back into operation with minimal disruption to the depot operations.



Fan shown in roof apex

## The Obstacles

The fan was situated in the roof apex with no means of access. Obstacles above the trains and equipment included:

- 25KV power lines
- Runway beams and conductor systems
- Fire alarm cables and pipes
- Old lattice and new beams for the building structure



Installing scaffolding

## Scaffolding

- Once designed and approved, scaffolding was installed.
- Each piece having to be walked over 100 metres.





Twin tower scaffolding design

### Lifting Beam

- The 4000kg lifting beam for the fan was integrated into the scaffold.
- The twin tower design allowed trains to pass safely on all three 'roads' during the task without interfering with any high-level cables or beams when operatives were not on site.



Damaged extraction unit

### Fan Damage

- Once completed, Street Cranexpress engineers removed the fan cowling.
- The extent of the damage was noted.
- The damage meant that the fan could no longer be used.



Preparing the replacement fan

### The replacement unit

- The replacement unit was prepared at ground level for installation.



Lifting the new fan

### Lifting the new fan

- The old fan was lowered.
- The new unit was then lifted through the maze of obstructions via a gap approximately 20mm larger than the fan itself.



New fan installed

### Installing the new fan

- The new fan was traversed into position along the lifting beam and installed.
- The fan was tested to run at full speed, and it performed excellently.