

Client: Bombardier Transportation UK Ltd

Area: Burton upon Trent



With a rolling stock of over 100,000 rail cars and locomotives worldwide, Bombardier Transportation is truly the world leader when it comes to the rail industry

Bombardier Transportation UK Ltd

Case Study

With its supply of complete trains, sub-systems, maintenance services, system integration and signalling, it covers the full spectrum of rail solutions.



Changes were subsequently made which meant the trains were forced to fully shut down their engines once they entered the service hub. So, to assist with charging the brakes once the service was completed and the engine was restarted, Bombardier installed several 'boosters' in the service hub to speed up the process and get the trains moving again as quickly as possible.

The problem came when it was discovered that the maintenance operators were opening the valves from the boosters too quickly, causing them to stall. Normally this would be remedied by installing an air receiver after the booster, buffering out the initial surge in compressed air demand. However, the problem was compounded by the fact that the boosters were positioned so close to the line that there was simply no room in the pits to install separate receiver tanks locally. As well as this, when the compressed air system was originally installed, regulators were fitted underground which had since failed causing a restriction in the compressed air flow to the boosters.



It seemed like a big ask, but CAS were able to come up with a perfect solution to the problem. They centralised the boosters onto one large air receiver which was installed on the mains inlet header that feeds all the pits. The benefits of this were three-fold: Firstly, centralising the system makes it 100% failsafe. If one booster fails, another booster can be used while repairs are made to the faulty one – meaning there is absolutely no downtime in the case of a fault. Secondly, the centralisation of the boosters meant there was a dramatic increase in stored energy within the system – energy that is on hand and ready to be used exactly when it is needed. And finally, because the boosters have been consolidated, not all of them need to be used at the same time. This cuts down maintenance costs considerably.



A spokesperson for Bombardier said: "We were delighted with the ingenuity, expertise and professionalism that CAS brought to this job. They went above and beyond a simple repair; they provided us with a solution that will ensure that our system is completely reliable, far more efficient and saves us a significant amount of money – we couldn't be happier with the way this project turned out."



So, when faced with a problem that might have proved difficult to solve, CAS rose to the challenge. Not only did we provide a solution that repaired the system, we also provided a solution that changed and improved the way the system worked, bringing massive benefits and peace of mind for Bombardier.

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