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# Case Study: Class 150 Battery Charging Raft



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## Project Overview:

*Pullman AC was approached by two UK rail industry customers to resolve a persistent reliability issue affecting the Battery Charging Raft on Class 150 Diesel Multiple Units (DMUs). Through detailed investigation and engineering-based solutions, Pullman AC developed a validated solution to improve reliability, maintain service continuity and strengthen long-term customer relationships.*

## Project Scope:

- *Root-cause investigation into recurring Battery Charging Raft alternator failures*
- *Development of a test rig to simulate and validate modified operating parameters*
- *Engineering of a revised 'limp mode' system incorporating a new pump*
- *Technical and economic evaluation of proposed solutions*
- *Support for improved operational reliability and reduced service disruption*

## Collaboration and Teamwork:

*Pullman AC worked with both customers to investigate a shared technical challenge affecting their respective Class 150 fleets. By combining its engineering expertise with a thorough understanding of the operational and financial implications, Pullman AC presented a practical, technically validated solution that both customers approved.*

*This collaborative approach addressed the immediate reliability issue while demonstrating Pullman AC's ability to support customers beyond its core product range.*

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## Delivering Excellence:

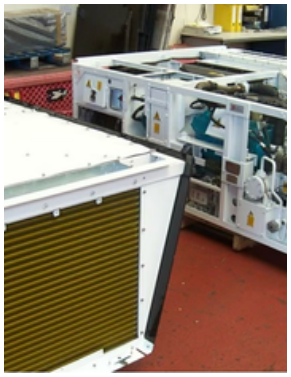
- *Conducted a thorough root-cause investigation into a longstanding alternator design issue*
- *Developed a dedicated test rig to validate modified parameters under realistic operating conditions*
- *Engineered a revised 'limp mode' system to allow trains to continue operating safely following a charging system fault*
- *Presented technically robust and economically viable recommendations to both customers*
- *Created a reusable test rig to support future troubleshooting and deliver ongoing efficiencies*

## Conclusion:

*The successful delivery of this project reinforced Pullman AC's position as a trusted technical partner for complex electrical systems. It also established a new customer relationship, leading to the award of a servicing and maintenance contract for Mark 4 air-conditioning units.*

*By combining technical expertise, collaborative problem-solving and a focus on operational reliability, Pullman AC delivered value beyond the original project scope, creating opportunities for continued customer support and future collaboration.*









# Let’s Work Together


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