In 2004, in collaboration with one of the world’s leading locomotive manufacturers, PDI designed a diesel powered auxiliary warming system for 78 locomotives destined for Tibet, where altitudes reach 17,000 ft. and temperatures drop to -40°F. The system was installed and tested on locomotives in Erie, PA and the Rocky Mountains prior to departure to China. The units where tested for vibration, performance, life cycle, low oxygen levels, debris, and potential lack of maintenance. Based on this project The PowerHouse™ Idle Reduction Technology was born.

Big Savings in Small Packages
The heart of the PowerHouse™ is the 136,500 BTU/hr (40kW) diesel-fired heat exchanger, which provides rapid heating and dependability. The PowerHouse™ is fully compliant with EPA Tier 4 Emissions Standards is EPA SmartWay certified, and offered in two unique design models. The PowerHouse™ 120 is the only 120 volt plug-in offered in the rail industry and is used when locomotives have ready access to 120V (5 amps) shore power. The diesel-powered Auxiliary Power Unit (APU) model is a modular, two-piece APU, and is ideal for road haul and run-through locomotives. The APU also includes a standard remote monitoring capability to provide real-time data, anytime, anywhere. Both PowerHouse™ models are the most compact in the industry and this design allows for easy installation in almost any locomotive. In addition, both PowerHouse™ models include microprocessor controls to automatically start and stop the heat exchanger to avoid continuous run time, further reducing fuel consumption. In fact, most customers realize a payback of their investment in only a few short months due to dramatic fuel savings.

End-to-End Engineered Systems and Solutions
PDI’s culture of continuous improvement has led to other innovations in the rail industry including freeze protection for fuel and compressor lines, advanced fuel and oil filtration systems and compliance with stringent cleanliness requirements. With nearly 35 years working in the locomotive and rail industry, PDI is well suited to conquer any design challenges sent our way. Our team of dedicated engineers and production professionals work in lockstep to provide premier customer service and innovative solutions.