

HIGH-PERFORMANCE DIESEL-FUELED CABIN HEATER
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Recent DOE-OHVT studies have shown that diesel emissions and fuel consumption can be greatly reduced at truck stops by switching from engine idle to auxiliary-fired heaters. Brookhaven National Laboratory (BNL) has studied high-performance diesel burner designs that address the shortcomings of current low fire-rate burners. Initial test results suggest a real opportunity for the development of a truly advanced truck heating system. The BNL approach is to use a low-pressure, air-atomized burner design derived from burner designs used commonly in gas turbine combustors. This paper reviews the design and test results for the BNL diesel-fueled cabin heater. The burner design is covered by U.S. Patent 6,102,687 and was issued to DOE on August 15, 2000.