

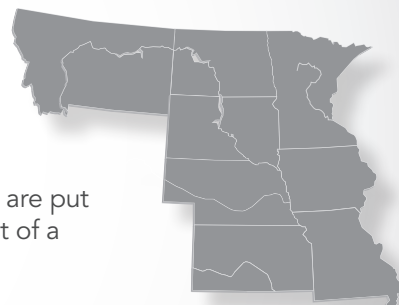


# HOTSTART IDLE REDUCTION

Improving your bottom line.

## The Region

The Great Plains region of the United States is the heart of its agriculture and raw material production. Here, extreme winter temperatures can present a serious challenge to the rail transport industry attempting to keep their trains ready to move the lifeblood of American economy. To see just how our heaters are put to the test, we monitored a HOTSTART-equipped locomotive through the worst of a Midwest winter – December to May.



## The System

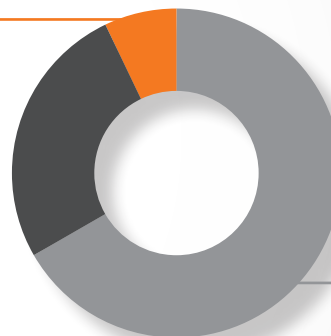
System Type: DLV Plug-In Layover System  
Model No: DLV3300-0904-00  
Heat Power: 30kW Coolant | 9kW Oil  
Power Source: Three-phase | 480 Volts

## Idle Reduction

The railroad was able to reduce the locomotive's idle time to just a fraction of the overall season. When not active, the locomotive was shut down, saving fuel, reducing emissions, and avoiding needless wear and tear on the engine.

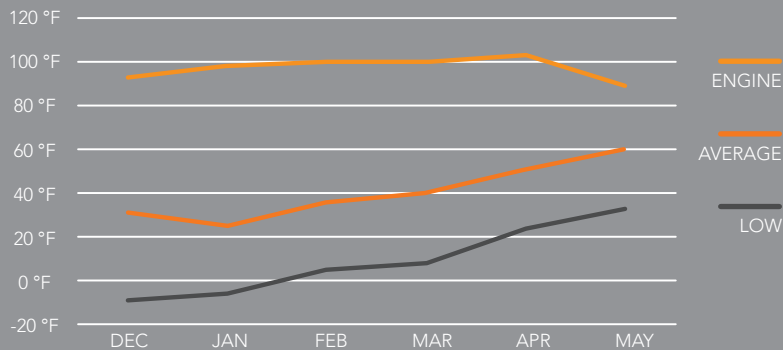
Engine Idle

**7%**



**66%**

Engine Off



## Engine Heating

During the winter, average temperatures fell as low as 25°F. Despite those conditions, engine heating temperatures registered an average of 98°F. In a period of extreme cold, the outside temperature plummeted to -6°F. The DLV system kept the engine at 93°F above the ambient temperature – ready and waiting to start.

## Fuel Savings

Hours spent with the engine off translated directly into savings – in both gallons and dollars.

But those savings didn't stop at the fuel tank. Compared to a typical engine idling through the winter, this locomotive didn't log unnecessary hours counted toward the next scheduled maintenance interval.

	Low Idle	High Idle
Idle gallons/hour	4.1	5.2
Idle cost/hour	\$7.38	\$9.36
Total saved gallons	10,098	12,808
Total saved cost	\$18,176.94	\$23,053.68

Calculated Fuel Cost: \$1.80/gallon

Monitored Heating Period: 2463 hours

Idle Rates per HOTSTART Fuel Consumption Calculator

[hotstart.com/en/home/products/locomotive-products/fuel-consumption-calculator/](http://hotstart.com/en/home/products/locomotive-products/fuel-consumption-calculator/)