HOTSTART IDLE REDUCTION
Improving your bottom line.

The Region

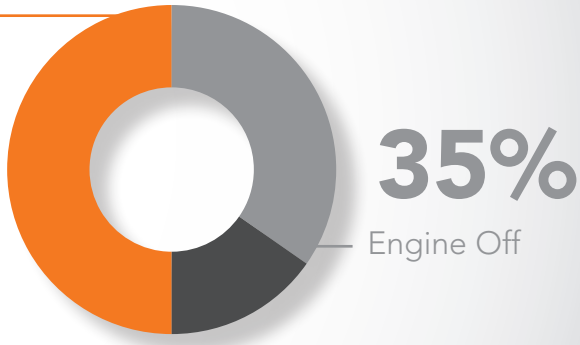
The Great Lakes region of the United States is an expansive waterway that serves as a critical conduit for international commerce. To transport materials overland, rail companies must contend with conditions that can swing quickly from mild to extreme in a matter of hours. To see just how our heaters are put to the test, we monitored a HOTSTART-equipped locomotive through the worst of a Great Lakes winter – November to April.

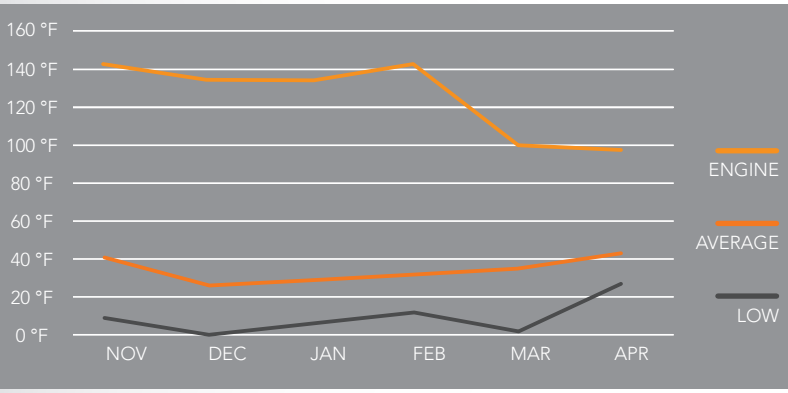
The System

System Type:	APU5 Diesel-Driven System
Model No:	APU5-110-110
Engine:	3-cylinder, inline 4-cycle
Heating:	Engine Coolant | Lube Oil
Features:	72V Charging | 3kW Cab Heat

Idle Reduction

The 35% engine-off period of over a thousand hours during the season already represents significant cost savings. However, taking advantage of engine heating opportunities and continuing the trend of eliminating idle time will realize increased savings down the road.





Engine Heating

Temperature swings were common throughout the season: March alone registered a high of 68 °F and a low of just 2 °F. November and December also had highs above 50 °F and lows below 10 °F. Despite these swings, average engine temperatures remained constant above 120 °F until spring, when heater usage lowered.

Fuel Savings

The APU's fuel-sipping engine provided significant fuel savings, consuming a fraction of what the locomotive engine would per hour.

Its diesel-driven capability provided additional flexibility – allowing the locomotive's engine to be shut off at any time, in any location, in any weather.

	Low Idle	High Idle
Idle gallons/hour	4.1	5.2
Idle cost/hour	$7.38	$9.36
APU gallons used*	638	638
APU fuel cost	$695	$695
Total saved gallons	5,294	6,886
Total saved cost	$9,529.20	$12,394.80

Calculated Fuel Cost: $1.80/gallon Monitored Heating Period: 660 hours
*APU Gallons Used: 0.45 gph/0.81 gph with heat boost (458 hours / 222 hours with boost)

Idle Rates per HOTSTART Fuel Consumption Calculator
hotstart.com/en/home/products/locomotive-products/fuel-consumption-calculator/