

Standard Thermo-siphon Heater

- Hot spots
- Uneven heat distribution

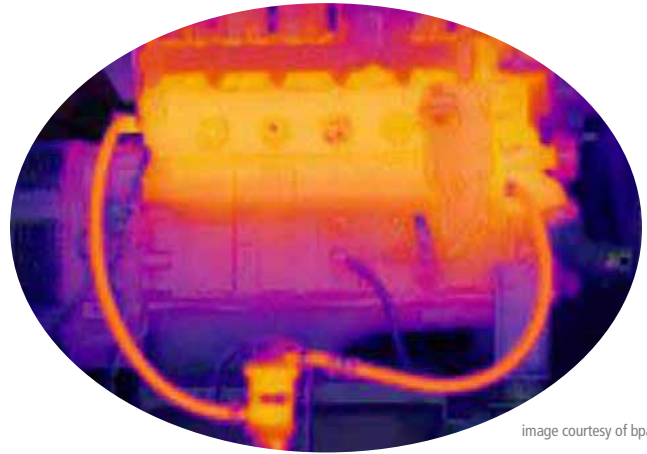


image courtesy of bpa.gov

Energy Efficient Block Heater

- Up to 55 percent energy savings
- Uniform heat distribution
- Fewer heating cycles
- Reduced wear on hoses and seals
- Quick start up

STATIONARY GENERATOR ENGINE BLOCK HEATERS



OVERVIEW

Emergency backup generators are kept at a range of temperatures from 90°F to 110°F to ensure their ability to start at a moment's notice. Most generators actually use more electricity than they produce over their lifetime. Standard electric resistance heaters utilize a convective circulation effect known as thermo-siphon. This method heats the engine block unevenly and inefficiently and may deteriorate piping materials. Replacing standard thermo-siphon heaters with energy efficient block heaters can provide up to 55 percent in energy savings. Savings depend on location, piping configuration and size of the generator. Notice the difference in the thermal pictures shown above. The energy efficient block heater produces a more uniform heat distribution throughout, increasing the reliability of the generator.

INCENTIVES

Incentives for energy efficient engine block heaters are available through Idaho Power's Commercial and Industrial Energy Efficiency Program for retrofits. **\$200 per unit** is available for energy efficient block heaters less than 3kW and **\$1,500 per unit** towards energy efficient block heaters greater than or equal to 3kW.

To qualify for an incentive, standby generator engine block heaters must be a stationary set and installed by a certified installer.

Visit idahopower.com/business for program details and requirements.

Payback

Costs of energy efficient block heaters vary depending on the size. Simple payback, including incentives, for retrofit projects is approximately 5 years.

References

Energy Efficient Emerging Technology, START YOUR ENGINES. Retrieved on August 15, 2016 from https://www.bpa.gov/EE/Technology/EE-emerging-technologies/Projects-Reports-Archives/Documents/EE_Block_HEATERS2.pdf

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