

A POWER GENERATION CASE STUDY

LITTLE ENGINE, BIG HOURS

UNIT: 10 kW Natural Gas
Genset

LOCATION: Girdwood, Alaska
(on the Turnagain Arm
near Cook Inlet)

THE JOB: Providing Prime Power
Supply for a Remote
AT&T Wireless Cell
Phone Site



Operating in the harsh environment of rural Alaska – where temperatures range from 80 degrees in the summer to minus 40 degrees in the winter – is enough to test the mettle of any kind of equipment. For a generator set that is producing power around the clock, 365 days a year, it's the severest kind of challenge. Fortunately, when the unit is a 10 kilowatt genset from Generac Power Systems, it's fully up to the task, as proven by a remarkable installation outside of Girdwood, Alaska.

Providing wide area coverage for cellular phone users is an important job for AT&T Wireless, especially in Alaska, where remote tower sites are common. Since electricity is not always available, an alternative means of powering portions of the network is essential.

The Girdwood cell site is a prime example, no pun intended. The Generac unit there provides prime power 24 hours a day, and – except for routine maintenance – is operating continuously on natural gas. Since its installation in September of 1999, this remarkable unit has logged over 17,000 hours to keep the Girdwood cell site up and running, day in and day out. The generator is located within a small enclosure, but is still subject to the harsh temperature extremes common in this part of Alaska.

The heart of this long-running genset is its Generac engine, a 1.5 Liter Mitsubishi long block modified with Generac designed fuel delivery and cooling

systems. This workhorse is typical of the hard-working engines found in Generac gensets. Unlike other manufacturers who are limited to a single line of engines (their own), Generac selects powerplants from the world's best engine builders. They're chosen for their ability to provide optimal power at different output ratings, and fitted with Generac-specific components designed especially for electrical power generation.

"The unit has proven to be extremely reliable, despite the extreme weather conditions in this area," says Harlen Hansen of Precision Power LLC, the Generac dealer that is providing the genset under contract to AT&T Wireless. "Often this unit operates in excess of 2000 hours between service intervals. The only shutdowns have been to perform routine maintenance."

Getting this kind of service out of the engine required only minor work, according to Hansen. "The unit was fairly simple to modify. This module was supplied with the Mitsubishi natural gas engine and required only slight modifications to convert from a standby to a continuous power application. We modified the unit to operate 1000 hours between service intervals with the addition of a Luberfiner 750 oil filter system. This increased the oil capacity and filtration."

This particular site, located atop a small rocky hill, covers a service area of approximately 50 square miles, and is one of 72 such sites that AT&T Wireless operates in the 49th state. "We are constantly upgrading and expanding our wireless system throughout Alaska," says Darrel Helton of AT&T Wireless. "We have enjoyed the relationship with Precision Power and Generac for providing quality products and service throughout our entire network."

Helton is more than pleased with the Generac equipment on the job at the Girdwood site. "The reliability of this unit and the service provided by Precision Power have increased the 'on air' dependability of this cellular site considerably," he says. "We have purchased many Generac standby diesel generator sets from Precision Power and have been pleased with both the dependability and quality of the units."



Bulletin 0166190SBY / Printed in USA 02.02



WAUKESHA, WISCONSIN



EAGLE, WISCONSIN



WHITEWATER, WISCONSIN



MAQUOKETA, IOWA

GENERAC[®]
POWER SYSTEMS, INC.

Generac Power Systems, Inc.

Highway 59 & Hillside Road

P.O. BOX 8

Waukesha, WI • 53187

1-888-GENERAC

Phone: (262) 544-4811

Fax: (262) 968-3791

infocenter@generac.com

generac.com