

Let Northwest Rail Electric help you with all your passenger railcar systems needs. Starting with power generating, hotel services, power distributing and power management, our extensive experience in passenger car systems can solve the most difficult problems. Allow us to show you how you can accomplish more with less generating and distribution capacity, saving fuel and capital.

We also excel at heating, ventilation and air conditioning systems: HVAC control systems to keep your passengers comfortable from Alaska and Canada in the winter to Arizona and Florida in the summer. In addition to temperature comfort our systems can also maintain humidity to keep your dome windows clear and provide further comfort for your passengers.

Our automation systems allow automatic transfer and control of critical systems when part of the power system shuts down.

Northwest Rail Electric GC-500 Series Generator and Power Controls For Providing Passenger Car and Train Power

Designed to Provide a Headache-Free Control, Monitoring,
and HEP Feed System for an Under-Car Generator.



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Package Features of the NW-GC-500 Series of Railroad Car Power Management and Engine Controls

Power Selection System:

Select between Head end power (HEP) receive, yard power, and generator.

Power Indicator Lights:

Lights indicate what power sources are available and which one of them is currently being used as a source of power. No guesswork involved when working in a dark situation. If the power is available, the light is green. If it is in use, the light turns red. Simple and Straightforward.



Switchgear:

May be either attached to an Anodized Aluminum Panel for electric locker use or a NEMA rated enclosure for under-car mounting.

Isolation Design:

The 480 volt electrical system is contained at the location of the switchgear, so that the only device on the control panel directly powered by high voltage (through dropping resistors) are power indicator lights.



Power Selector System for:

- Head end power (HEP) receive
- Yard Power (option if required)
- Generator
 - Manual Operation
 - ❖ Feed power system on this car only, pass HEP through to other cars
 - ❖ HEP feed (power this car and feed HEP)
 - ❖ Loop protection
 - ❖ Dead buss control
 - ❖ Key lockout
 - Automatic Operation
 - ❖ Start after HEP failure
 - ❖ Start after yard power failure (optional)
- Return to HEP or yard automatic after timed cycle. Delay reduces power pulses when HEP is only restored for a brief period of time.
- Yard power control only in package (contactor & breaker optional)
- Sized to your application (65 kw to 1mw)
- Generator main breaker sized to your application (80 to 1,200 amp)
- Generator inactive (control loop pass thru for other power source)

Package size

- In car unit 17" high, 15" wide 7" deep
- Power unit 20" high, 30" wide, 8" deep (up to 200kw)



Metering:

- Oil pressure
- Water temperature
- Battery voltage (optional)
- Running time (optional)
- Power Output voltage, current, and frequency metering (optional)

Engine Control and Annunciator Features

- Engine annunciator and shut down
 - Low oil pressure
 - Low oil level
 - High coolant temperature
 - Low coolant level
 - Overcrank (after three automatic start tries)
 - Overspeed
- Engine annunciation (Only)
 - Engine running
 - Engine battery charging
 - alternator failure
- Additional features
 - Preheat control
 - Auto timed engine cool down

Most units come with factory set delay times for oil level shutdown, low coolant level shutdown, engine overspeed, and engine starter crank time. These are set by Northwest Rail Electric for your specific system.

