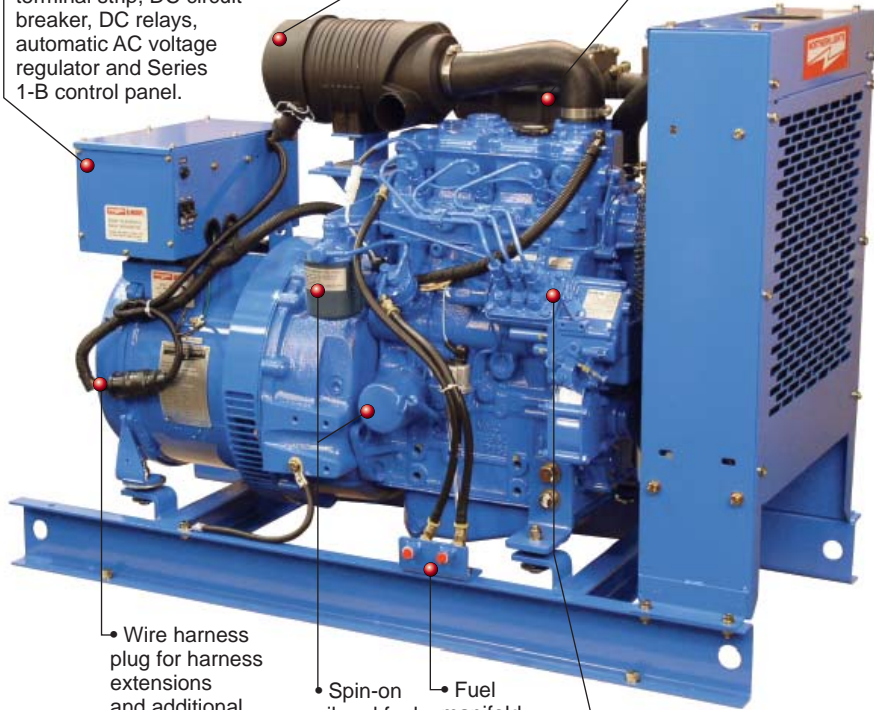


Service Side

Vibration isolated junction box has AC terminal strip, DC circuit breaker, DC relays, automatic AC voltage regulator and Series 1-B control panel.

High volume air filter with dry element protects engine.

Easy access oil fill.



Wire harness plug for harness extensions and additional control panels.

Spin-on oil and fuel filters.

Fuel manifold eases installation.

Self-venting fuel system with Bosch-type inline injection pump.

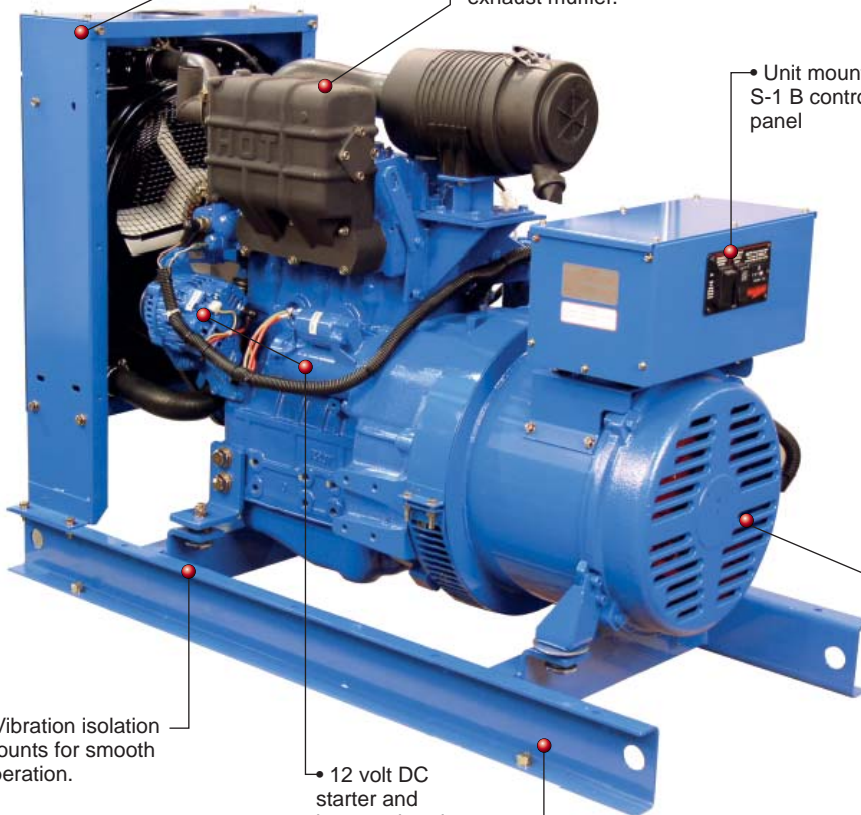
Non-Service Side

Large radiator. Steel radiator shroud protects radiator and operator.

Cast iron exhaust manifold with intergral exhaust muffler.

Tough, blue enamel paint.

Unit mounted S-1 B control panel



Vibration isolation mounts for smooth operation.

12 volt DC starter and battery charging alternator.

Welded steel base frame for strength.

12 kW

60 Hz / 1800 RPM

10 kW

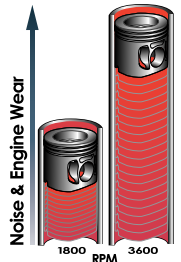
50 Hz / 1500 RPM

Prime power experience.

You'll find Northern Lights generators wherever prime power is needed. We began building Northern Lights sets to power the Alaskan bush country in 1963. Today our sets and dealers are at work world-wide.

Tractor-tough diesels.

Designed for farm tractors, the long stroke engines that power the NL843NW3 have the low end torque needed to start big electric motors. Dependable too; some sets have logged over 25,000 hours with just routine maintenance. All operate at 1800 rpm (1500 rpm for 50 Hz). This is half the speed of light duty 3600 rpm sets. Half the wear and tear, too.



Clean, quiet operation.

This set meets US EPA Tier III emission standards. The built-in muffler reduces exhaust noise so well that an additional muffler is not needed.



Fuel economy.

Economical operation is a necessity in remote areas where fuel is expensive. These diesel sets use less fuel than comparable gasoline sets. Diesel is also less expensive and much safer to transport and store.

We keep it simple.

Northern Lights are easy to install, operate and maintain. Each has a self-venting fuel system, mounted control panel and is ready for connection to your electrical distribution system. Just add a battery and fuel, and you have power at the touch of a button.

Service is easy, too. All the maintenance points are on one side. Low oil pressure and high coolant temperature shutdowns protect your investment.

Thorough testing.

Every Northern Lights has been fully load tested before shipment. This is part of a quality control program that assures your satisfaction and years of service.

See your Dealer.

Let them show you the set that is right for you. They will also explain the options available to customize the set to meet your special power requirements.

Featuring new W-Series generator

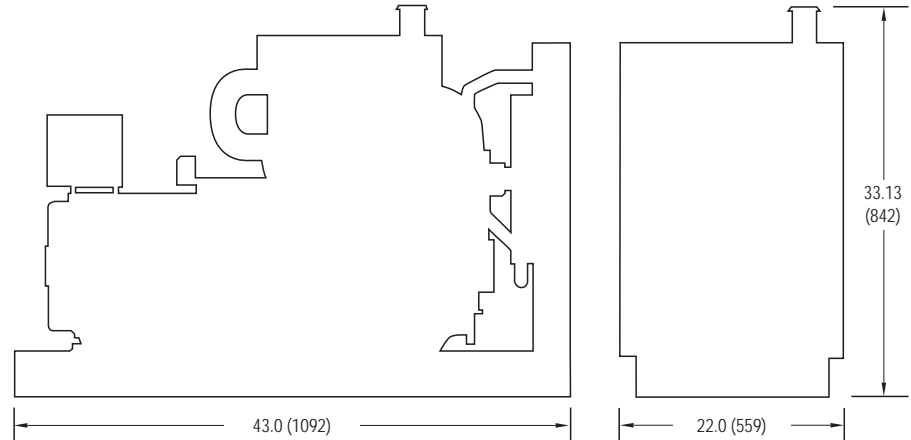
The new W-Series brushless generator features an auxiliary stator winding that supplies separate and stable power to the Automatic Voltage Regulator. The result:

- Real 300% short circuit capability.
- Improved AC breaker performance.
- 1% no load to full load voltage regulation.
- Low 95°C/50°C temperature rise rating.

See your dealer for more information.

AC Output ¹	
12 kW	60 Hz, 1800 RPM, 1 Ph, 1.0 PF, 120-240 V/50A, 120 V/100A
10 kW	50 Hz, 1500 RPM, 1 Ph, 1.0 PF, 220 V/45.2A
Optional	Three Phase with 0.8 PF
Voltage regulation	±1%
Lugger L843 Engine	
Type	Vertical 3 cylinder diesel
Displacement	91 in ³ (1.5 ltr)
Bore/Stroke	3.30/3.5 in (84/90 mm)
HP @ RPM	20.1/1800 16.6/1500
Approx. fuel use	
1800 RPM @ full load ²	1.2 gph (4.5 lph)
1800 RPM @ half load ²	0.62 gph (2.3 lph)
1500 RPM @ full load ²	1.0 gph (3.78 lph)
1500 RPM @ half load ²	0.51 gph (1.93 lph)
Installation Data & Weight	
Exhaust outlet	1.38 inch (35 mm)
Fuel inlet and return	1/4 inch NPT
Approximate dry weight	757 lbs (343 kg)

NL843NW3 Dimensional Drawing



NL843NW3 Overall Dimensions L x W x H: 43.0 x 22.0 x 33.13 inch (1092 x 559 x 842 mm)

Base Length: 45.75 in (1162 mm) **Base Width:** 21.1 in (536 mm)

Dimensions given in inches (mm). Dimensions subject to change without notice. Contact dealer or visit www.northern-lights.com for most current installation drawings.

- Based on 1.0 unity power factor. Deratings: 3% per 1000 ft. over 500 feet above sea level. 1.5% for every 10° over 77°F
- Actual fuel consumption will vary depending on operating conditions.

Features and Benefits

Engine Block

- Four cycle, 3 cylinder, liquid cooled, naturally aspirated, overhead valve, industrial-duty diesel.
- Swirl combustion design improves fuel efficiency, reduces smoke and noise.
- Glow plugs for fast cold weather starting.

Cooling System

- Liquid-cooled with radiator and pusher cooling fan. Steel radiator shroud and fan guard protects the radiator and operator.

Self-Venting Fuel System

- Bosch-type in-line injection pump.
- Stop solenoid controls the fuel rack, not throttle, to eliminate speed variance and linkage problems.
- Engine speed governed to 5% for close AC frequency control.
- Pintle fuel injectors have replaceable tips for lower service costs.
- Mechanical fuel pump with hand primer.
- Large spin-on fuel filter.
- Fuel line manifold and flexible fuel lines for easy fuel tank connection.

Lubrication System.

- Full flow, spin-on oil filter with bypass.
- 5.8qt. (5.5ltr) oil capacity for better lubrication.

Intake and Exhaust

- Large replaceable air filter protects engine in dusty environments.
- Residential muffler built into the exhaust manifold saves installation time and costs.
- Set meets US EPA Tier III emission requirements for cleaner air.

DC Electrical System

- 12 volt system includes starter motor, battery charging alternator with solid state voltage regulator and DC circuit breaker.
- Standard, unit mount S-1-B control panel has engine hour meter, start-stop switch with run light and preheat switch.
- Dual panel relays and quick disconnect harness plug-ins. With optional Y-harness and 10, 20 or 40 foot harness extensions, you can have up to six remote control panels, up to 100 feet from the set.
- Safety shutdown system for low oil pressure and high coolant temperature.



AC Generator

- Northern Lights, direct coupled, brushless AC generator end is maintenance free. 4 lead, 1 phase, 1.0 pf, 50 or 60 Hz output. 12 lead-3 phase output is optional. Conservative heat rise rating: 95°C/50°C ambient for long generator life.
- Automatic Voltage Regulator is powered by dedicated AC winding for true 300% short circuit capability. Quick ±1% RMS no load to full load voltage regulation. AVR has circuit breaker protection.
- Generator features high quality, Class "H" epoxy insulation, accessible diodes, over-sized bearings and junction box for wiring.
- High air flow from integral fan keeps generator running cool.

Special Equipment

- Welded steel skid frame gives rigid support and makes installation easy.
- Flexible mounts isolate engine vibration for smooth operation.
- Long life, blue enamel paint finish.
- Operator's and parts manuals.
- Rigorous quality control includes a test run with load.
- Shipping crate protects set.

Accessories and Optional Equipment



Let your dealer help you custom design a set that matches your special application using the complete line of Northern Lights accessories:

- Unit enclosures and mobile units
- AC and DC control panels
- Exhaust system components
- Fuel filter-water separators
- Wire harness extensions
- Alarms and safety shutdown systems
- Heaters
- Air ducts
- Dry sump units
- Batteries... and much more.

Dealer

4420 14th Ave. NW., Seattle WA 98107
 Tel: (206) 789-3880 • 1-800-762-0165 • Fax: (206) 782-5455
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