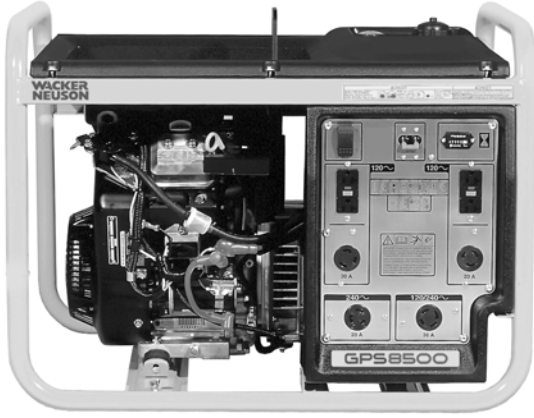
0176674en	002
0809	

Generator, Non-CARB

GPS 8500
GPS 9700



OPERATOR'S MANUAL

0176674EN

DANGER

CARBON MONOXIDE

Using a generator indoors CAN KILL YOU IN MINUTES.

Generator exhaust contains carbon monoxide (CO). This is a poison you cannot see or smell. If you can smell the generator exhaust, you are breathing CO. But even if you cannot smell the exhaust, you could be breathing CO.

- NEVER use a generator inside homes, garages, crawlspaces, or other partly enclosed areas. Deadly levels of carbon monoxide can build up in these areas. Using a fan or opening windows and doors does NOT supply enough fresh air.

- ONLY use a generator outside and far away from windows, doors, and vents. These openings can pull in generator exhaust.

Even when you use a generator correctly, CO may leak into the home. ALWAYS use a battery-powered or battery-backup CO alarm in the home.

If you start to feel sick, dizzy, or weak after the generator has been running, move to fresh air RIGHT AWAY. See a doctor. You could have carbon monoxide poison.

Machines covered in this manual

Machine	Item Number
GPS 8500	0008286 Rev 118 and higher
GPS 9700	0620264

CALIFORNIA

Proposition 65 Warning:

WARNING

Engine exhaust, some of its constituents, and certain vehicle components, contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Foreword

This manual provides information and procedures to safely operate and maintain this Wacker Neuson model. For your own safety and protection from injury, carefully read, understand and observe the safety instructions described in this manual.

Keep this manual or a copy of it with the machine. If you lose this manual or need an additional copy, please contact Wacker Neuson Corporation. This machine is built with user safety in mind; however, it can present hazards if improperly operated and serviced. Follow operating instructions carefully! If you have questions about operating or servicing this equipment, please contact Wacker Neuson Corporation.

The information contained in this manual was based on machines in production at the time of publication. Wacker Neuson Corporation reserves the right to change any portion of this information without notice.

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1. Safety Information

This manual contains DANGER, WARNING, CAUTION, *NOTICE* and NOTE callouts which must be followed to reduce the possibility of personal injury, damage to the equipment, or improper service.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE*:** Used without the safety alert symbol, ***NOTICE indicates a situation which, if not avoided, could result in property damage.

Note: *Contains additional information important to a procedure.*

1.1 Laws Pertaining to Spark Arresters

Notice: State Health Safety Codes and Public Resources Codes specify that in certain locations spark arresters be used on internal combustion engines that use hydrocarbon fuels. A spark arrester is a device designed to prevent accidental discharge of sparks or flames from the engine exhaust. Spark arresters are qualified and rated by the United States Forest Service for this purpose.

In order to comply with local laws regarding spark arresters, consult the engine distributor or the local Health and Safety Administrator.

1.2 Operating Safety

BACKFEED FROM THE GENERATOR INTO THE PUBLIC POWER DISTRIBUTION SYSTEM CAN CAUSE SERIOUS INJURY OR DEATH TO UTILITY WORKERS!

Improper connection of generator to a building's electrical system can allow electrical current from the generator to backfeed into utility lines. This may result in electrocution of utility workers, fire, or explosion. Connections to a building's electrical system must be made by a qualified electrician and comply with all applicable laws and electrical codes.

If connected to a building's electrical system the generator must meet the power, voltage, and frequency requirements of the equipment in the building. Differences in power, voltage, and frequency requirements may exist and improper connection may lead to equipment damage, fire, and personal injury or death.

Familiarity and proper training are required for the safe operation of the machine. Machines operated improperly or by untrained personnel can be dangerous. Read the operating instructions contained in both this manual and the engine manual and familiarize yourself with the location and proper use of all controls. Inexperienced operators should receive instruction from someone familiar with the machine before being allowed to operate it.

1.2.1 NEVER operate the generator when open containers of fuel, paint, or other flammable liquids are near.

1.2.2 NEVER operate the generator, or tools attached to the generator, with wet hands.

1.2.3 NEVER use worn electrical cords. Severe electrical shock and equipment damage may result.

1.2.4 NEVER run the electrical cords under the generator, or over vibrating or hot parts.

1.2.5 NEVER enclose or cover the generator when it is in use or when it is hot.

1.2.6 NEVER overload the generator. The total amperage of the tools and equipment attached to the generator must not exceed the load rating of the generator.

1.2.7 NEVER operate the machine in snow, rain, or standing water.

1.2.8 NEVER allow untrained personnel to operate or service the generator. The generator set should be set up by a certified electrician.

1.2.9 Store the machine properly when it is not being used. The machine should be stored in a clean, dry location out of the reach of children.

1.2.10 Be sure the machine is on a firm, level surface and will not tip, roll, slide, or fall while operating.

1.2.11 ALWAYS transport the generator in an upright position.

1.2.12 ALWAYS keep the machine at least one meter (three feet) away from structures, buildings, and other equipment during use.

1.2.13 ALWAYS keep the area immediately surrounding and underneath the machine clean, neat, and free of debris and combustible materials. Make sure that the area overhead is clear of debris that could fall onto or into the machine or exhaust compartment.

1.2.14 ALWAYS remove all tools, cords, and other loose items from the generator before starting it.

1.2.15 ALWAYS make certain the machine is well-grounded and securely fastened to a good earthen ground per national and local regulations.

1.3 Operator Safety while using Internal Combustion Engines

DANGER

Internal combustion engines present special hazards during operation and fueling. Read and follow the warning instructions in the engine owner's manual and the safety guidelines below. Failure to follow the warnings and safety standards could result in severe injury or death.

1.3.1 NEVER use this generator inside a home or garage, EVEN IF doors and windows are open. Only use OUTSIDE and far away from windows, doors, and vents. Using a generator indoors CAN KILL YOU IN MINUTES. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.

1.3.2 NEVER use a generator inside an enclosed area such as a tunnel or a trench.

1.3.3 Do not smoke while operating the machine.

1.3.4 Do not smoke when refueling the engine.

1.3.5 Do not refuel a hot or running engine.

1.3.6 Do not refuel the engine near an open flame.

1.3.7 Do not spill fuel when refueling the engine.

1.3.8 Do not run the engine near open flames.

1.3.9 DO NOT start the engine if fuel has spilled or a fuel odor is present. Move the generator away from the spill and wipe the generator dry before starting.

1.3.10 Refill the fuel tank in a well-ventilated area.

1.3.11 Replace the fuel tank cap after refueling.

1.3.12 ALWAYS check the fuel lines and the fuel tank for leaks and cracks before starting the engine. Do not run the machine if fuel leaks are present or the fuel lines are loose.

1.4 Service Safety

Poorly maintained equipment can become a safety hazard! In order for the equipment to operate safely and properly over a long period of time, periodic maintenance and occasional repairs are necessary. If the generator is experiencing problems or is being serviced, attach a "DO NOT START" sign to the control panel to notify other people of its condition.

1.4.1 Do not use gasoline or other types of fuels or flammable solvents to clean parts, especially in enclosed areas. Fumes from fuels and solvents can become explosive.

1.4.2 DO NOT attempt to clean or service the machine while it is running.

1.4.3 DO NOT modify the machine without the express written approval of the manufacturer.

1.4.4 DO NOT allow water to accumulate around the base of the machine. If water is present, move the machine and allow the machine to dry before servicing.

1.4.5 DO NOT service the machine if your clothing or skin is wet.

1.4.6 DO NOT allow untrained personnel to service this equipment. Only trained electrical technicians should be allowed to service the electrical components of this equipment.

1.4.7 Keep the machine clean and labels legible. Replace all missing and hard-to-read labels. Labels provide important operating instructions and warn of dangers and hazards.

1.4.8 ALWAYS replace the safety devices and guards after repairs and maintenance.

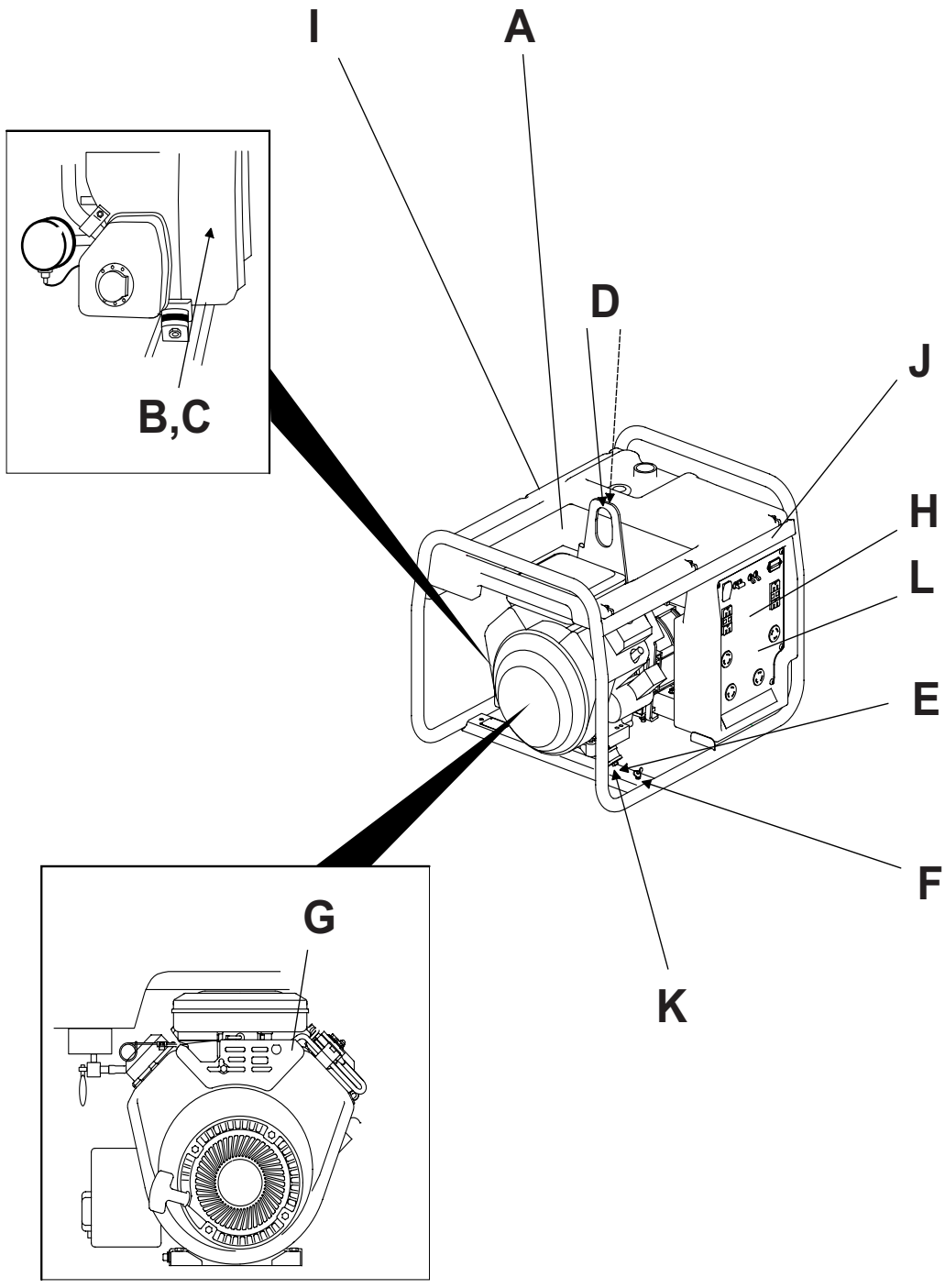
1.4.9 ALWAYS let the engine cool before transporting or servicing it.

1.4.10 ALWAYS keep hands, feet, and loose clothing away from the moving parts on the generator and engine.

1.4.11 ALWAYS turn the engine off before servicing the machine. If the engine has electric start, disconnect the negative terminal on the battery before servicing the machine.

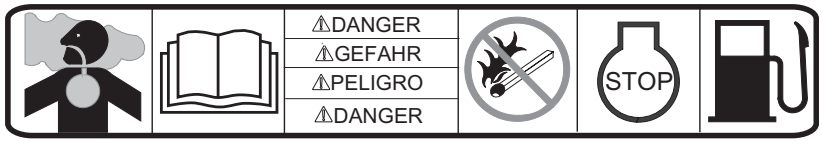
1.4.12 ALWAYS keep the fuel lines in good condition and properly connected. Leaking fuel and fumes are extremely explosive.

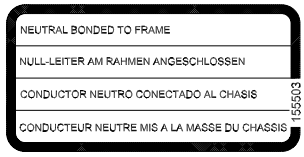
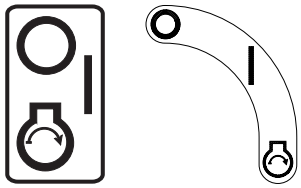
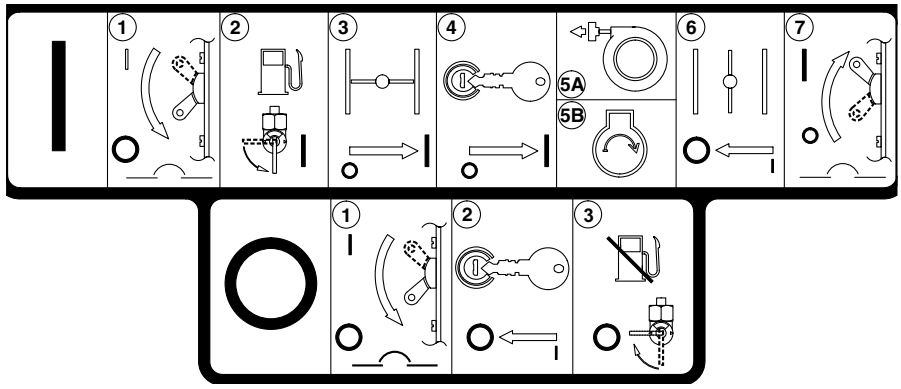
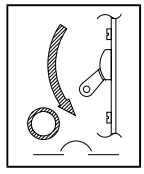
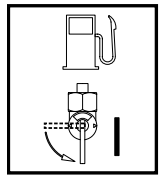
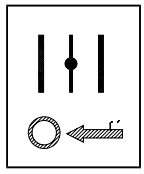
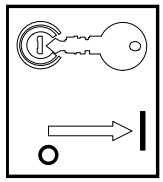
1.5 Label Locations

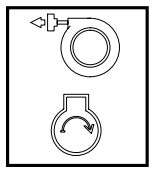
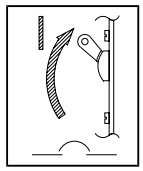
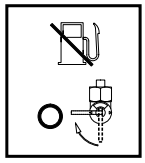
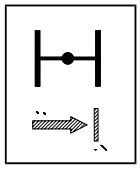
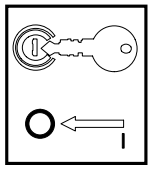
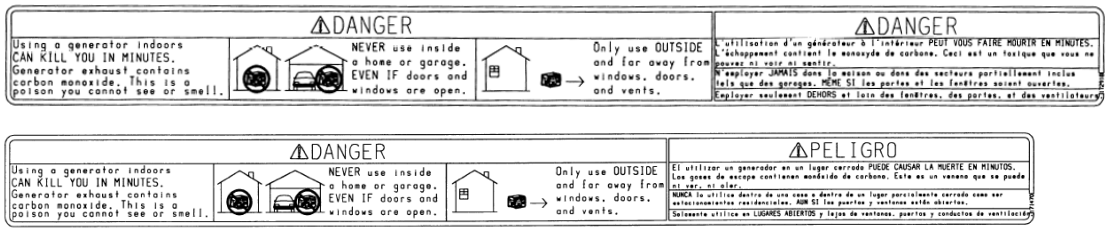
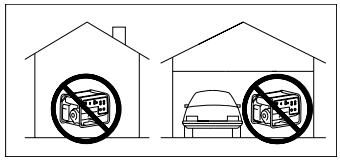


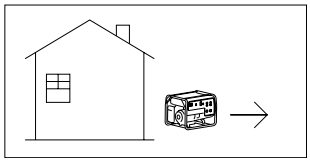
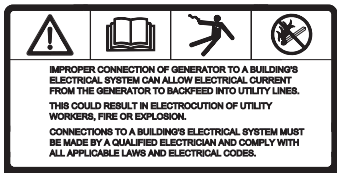
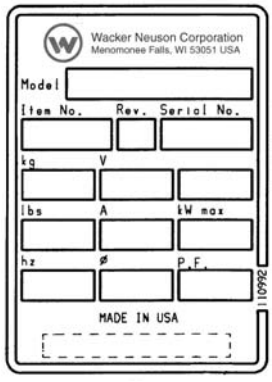
1.6 Safety and Operating Labels

Wacker Neuson machines use international pictorial labels where needed. These labels are described below:

	Label	Meaning
A	 DANGER! Engines emit carbon monoxide; operate only in well-ventilated area. Read the Operator's Manual. No sparks, flames, or burning objects near the machine. Shut off the engine before refueling.	
B		WARNING! Hot surface!
C		CAUTION! Read and understand the supplied Operator's Manual before operating this machine. Failure to do so increases the risk of injury to yourself or others.
D		CAUTION! Lifting point.
E		Electrical ground

	Label	Meaning
F		Neutral bonded to frame.
G		Key switch: off on start
H		
		Open main circuit breaker.
		Open the fuel flow valve.
		Open the choke.
		Turn engine key switch to “ON” position.

	Label	Meaning
		Pull rewind starter or turn engine key switch to crank starter.
		Close main circuit breaker.
		Close the fuel flow valve.
		Close the choke.
		Turn engine key switch to “OFF” position.
I, J	 Using a generator indoors CAN KILL YOU IN MINUTES. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell.	
		NEVER use inside a home or garage, EVEN IF doors and windows are open.

	Label	Meaning
		Only use OUTSIDE and far away from windows, doors, and vents.
K		This equipment **does not** meet California EVP emission regulations for small off-road engines.
L		Improper connection of generator to a building's electrical system can allow electrical current from the generator to backfeed into utility lines. This may result in electrocution of utility workers, fire, or explosion. Connections to a building's electrical system must be made by a qualified electrician and comply with all applicable laws and electrical codes. Do not run the engine near open flames.
		A nameplate listing the model number, item number, revision number, and serial number is attached to each unit. Please record the information found on this plate so it will be available should the nameplate become lost or damaged. When ordering parts or requesting service information, you will always be asked to specify the model number, item number, revision number, and serial number of the unit.
		This machine may be covered by one or more patents.

2. Operation

2.1 Application and Power Requirements

This generator is designed to operate single-phase, 60 Hz appliances running at 120 and 240 VAC.

***NOTICE*:** Do not exceed the continuous rated output of the generator. Damage to tools or generator will occur. See *Technical Data.*

Check the nameplate or label provided on tools and appliances to make sure their power requirements are met by the power output of the generator. If the wattage is not given for a particular tool or appliance, contact the tool manufacturer for wattage requirements.

Some appliances and tools require a surge of current when starting. This means that the amount of power needed to initially start the equipment is larger than the power required to keep it running. The generator must be capable of supplying this "surge" current. Other types of appliances require more power than is actually stated on their nameplate.

The information in “Approximate Starting Power Requirements” is offered only as a general guideline to help you determine power requirements for different types of equipment. Check with your nearest Wacker dealer, or contact the manufacturer or dealer of the tool or appliance, if you have questions regarding power requirements.

Approximate Starting Power Requirements

- Incandescent lights and appliances such as irons and hot plates, which use a resistive-type heating element, require the same wattage to start and run as is stated on their nameplates.
- Fluorescent and mercury lamps require 1.2–2 times their stated wattage to start.
- Electrical motors and many types of electrical tools often require a large starting current. The amount of starting current depends on the type of motor and its use.
- Most electrical tools require 1.2–3 times their stated wattage for starting.
- Loads such as submersible pumps and air compressors require a very large force to start. They need as much as 3–5 times the wattage stated on the nameplate in order to start.

If the wattage is not given for a particular tool or appliance, it can be calculated by multiplying its voltage and amperage requirements:

Single Phase: VOLTS x AMPS = WATTS

Three Phase: VOLTS x AMPS x 1.732 x 0.8 = WATTS

2.2 Installation

Place the generator in an area where it will not be exposed to rain, snow, or direct sunlight. Make sure it is positioned on firm, level ground, so it will not slide or shift. Position the engine exhaust away from areas where people may be present.

The surrounding area must be free from water and moisture. All components must be protected from excessive moisture.

Using a generator indoors CAN KILL YOU IN MINUTES. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell. NEVER use this generator inside a home or garage, EVEN IF doors and windows are open. Only use this generator OUTSIDE and far away from windows, doors, and vents.

NEVER install a generator in an enclosed area such as a tunnel or a trench. Using a generator in a tunnel or a trench CAN KILL YOU IN MINUTES. Generator exhaust contains carbon monoxide. This is a poison you cannot see or smell. NEVER use this generator inside a tunnel or a trench.

2.3 Generator Derating

All generators are subject to derating for altitude and temperature. Internal combustion engines, unless modified, run less efficiently at higher altitudes due to the reduction of air pressure. This translates into a lack of power and thus reduction in generator output. Temperature affects both engine and generator performance. As temperature increases, an engine will run less efficiently and more resistance will be found in electrical components. Therefore, as the temperature increases, the output of the generator decreases. Altitude also affects the cooling capacity of air—the higher the altitude the less dense the air is and thus the lower its ability to transfer heat.

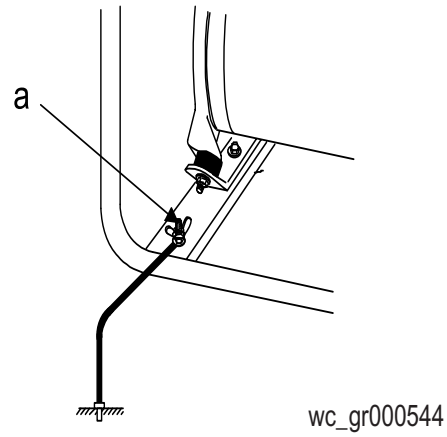
For every increase in altitude of 500 m (1650 ft.) above 1000 m (3300 ft.), the output of the generator will be reduced by 3%. For every increase of 5° C (9° F) in ambient temperature above 40° C (104° F), the output of the generator will be reduced by 3%. Use the tables shown for altitude and temperature deration factors. It may be necessary to consider both altitude and ambient temperature deration factors to determine true generator output.

Ambient Temp. °C (°F)	Derate	Factor
45 (113)	3 %	0.97
50 (122)	6 %	0.94
55 (131)	9 %	0.91
60 (140)	12 %	0.88

Altitude m (ft.)	Derate	Factor
1500 (4900)	3 %	0.97
2000 (6600)	6 %	0.94
2500 (8200)	9 %	0.91
3000 (9900)	12 %	0.88
3500 (11500)	15 %	0.85
4000 (13100)	18 %	0.82

2.4 Grounding the Generator

A ground connection **(a)** is located on the generator frame. For proper operating safety, this ground terminal must be connected to a good ground source. This ground connection must comply with National Electrical Code standards, and state and local regulations.



2.5 Use of Extension Cords

When a long extension cord is used to connect an appliance or tool to the generator, a voltage loss occurs—the longer the cord, the greater the voltage loss. This results in less voltage being supplied to the appliance or tool and increases the amount of current draw or reduces performance. A heavier cord with a larger wire size will reduce the voltage loss.

Damaged extension cords can cause electrical shock, resulting in serious injury or death. DO NOT use worn, bare, or frayed cords. Replace damaged cords immediately.

Use the chart below as a guide for selecting proper cable size.

Current (Amps)	Load in Watts		Maximum Cable Length in Feet			
	120V	240V	#10	#12	#14	#16
2.5	300	600	1000.	600	375	250
5	600	1200	500	300	200	125
7.5	900	1800	350	200	125	100
10	1200	2400	250	150	100	-
15	1800	3600	150	100	65	-
20	2400	4800	125	75	50	-

Use only extension cords rated for outdoor use and equipped with a third-wire ground.

***NOTICE*:** Operating equipment at low voltage can cause it to overheat.

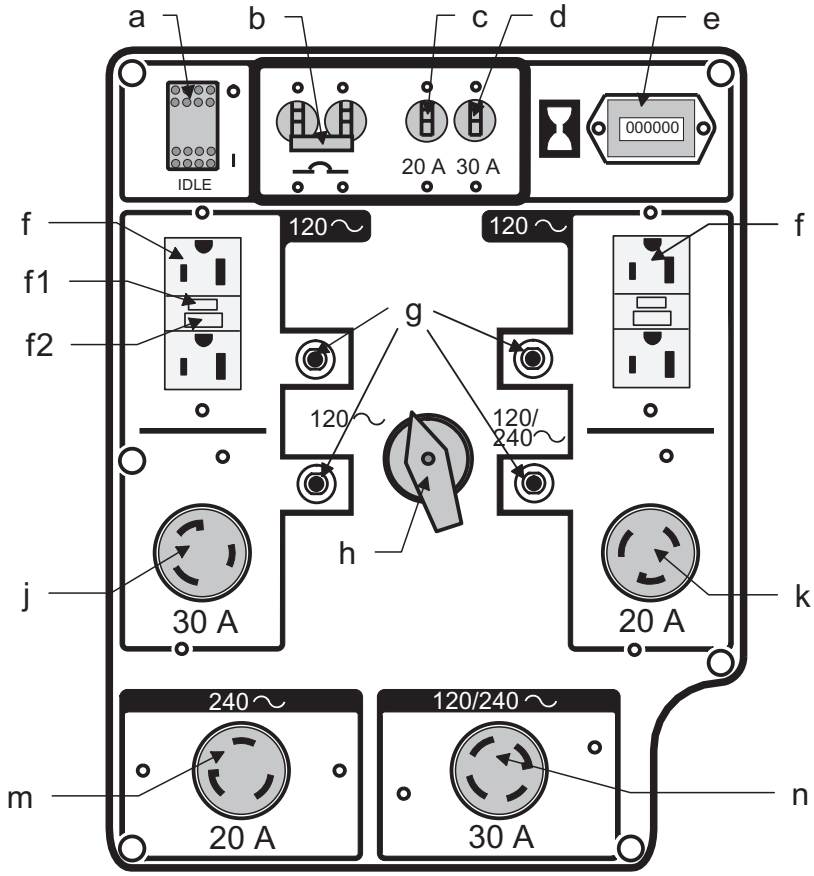
2.6 Recommended Battery

This generator is shipped without a battery. The recommended battery to be used is:

Battery Type	22NF
Voltage	12V
Capacity	230 Cold Cranking Amps

2.7 Control Panel

Ref.	Description	Ref.	Description
a	Auto Idle Switch	g	Thermal Overload
b	Main Circuit Breaker	h	Voltage Selector Switch
c	240V 20A Overcurrent Circuit Breaker	j	120V 30A Twist-lock Receptacle
d	120/240V 30A Overcurrent Circuit Breaker	k	120V 20A Twist-lock Receptacle
e	Hour meter	m	240V 20A Twist-lock Receptacle
f	120V GFI Duplex Receptacle	n	120/240V Twist-lock Receptacle



2.8 Main Circuit Breaker

The generator is protected by a main breaker **(b)** located on the control panel. The circuit breaker protects the generator from severe overloads or short circuits. If the circuit breaker opens, turn the engine off immediately and determine the cause before restarting. Check the appliances and tools attached to the generator for defects and make sure their power requirements do not exceed the power rating of the generator or the current limit of the receptacles.

When the circuit breaker opens **(O)**, the breaker lever will snap down. To reset circuit breaker, lift lever up **(I)**.

2.9 Ground Fault Circuit Interrupt (GFI)

Each of the two 120V, 20 amp receptacles **(f)** is protected by both a ground fault interrupt (GFI) and a thermal overload. The GFI shuts off power to the circuit when a ground fault occurs in the generator or a piece of equipment attached to the generator. The thermal overload **(g)** will trip (pop out) if too much current is drawn through the receptacles, as in a short to ground. The GFI should be tested for proper operation every time the generator is used.

To test GFI:
Start generator. Place main circuit breaker in closed position. Turn auto idle “OFF” **(O)**. Push TEST button **(f1)** on receptacle in. The RESET button **(f2)** will pop out. Power is now off at the receptacles. If the RESET button does not pop out, the GFI is not working. Do not run generator until the problem can be corrected. To restore power to receptacles, push the RESET button in.

If the RESET button pops out during operation, stop the generator and check generator and equipment for defects.

2.10 Voltage Selection

The voltage selector switch **(h)** allows the generator to operate in either single (120V) or dual voltage (120/240V) mode.

In single voltage mode only the 120V twist lock and 120V duplex receptacles are powered. The full rated power of the generator is shared between the four receptacles.

In dual voltage mode both the 120V and 240V receptacles are powered; however, only half the rated power is available at the 120V GFI receptacles and half at the 120V twist lock receptacle. Full power is available at the 240V twist lock receptacle.

***NOTICE*:** NEVER switch the voltage selector switch with the main breaker on! This can cause arcing and can damage the generator. Turn all tools and appliances off and place main breaker in the “OFF” (open) position **(O)** before changing the voltage switch position.

2.11 240V Receptacles

240 volt power is available at twist-lock receptacles **(m)** and **(n)**. 120 volt power is also available at twist-lock receptacle **(n)** and at receptacles **(j)** and **(k)**.

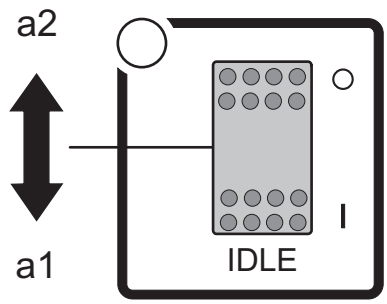
The thermal overloads for **(j)** and **(k)** perform as described for **(g)** in *GFI.* However, protection for the 240V receptacles is provided by overcurrent circuit breakers, **(c)** for **(m)** and **(d)** for **(n)**. If too much current were to be drawn through either overcurrent circuit breaker, the breaker would trip open. Correct the source of the overcurrent before resetting the breaker.

To attach a power cord to a twist-lock receptacle, insert plug into receptacle and turn it clockwise to lock it in place.

2.12 Engine Auto Idle

The auto idle switch **(a)** automatically reduces engine speed 5 seconds after all appliances or tools attached to the generator have been turned off. Engine automatically returns to full speed when a tool or appliance is turned back on.

To turn auto idle feature on, push auto idle switch to ON **(I)**. This position is recommended while the generator is running to minimize fuel consumption. To avoid extended engine warm-up periods, keep switch OFF **(O)** when starting the engine and until engine reaches operating temperature.



2.13 Engine Speed

Generators require a fixed engine speed to maintain the correct voltage. Engine speed is controlled by a governor which automatically adjusts to varying loads on the engine to maintain a constant speed of 3600 rpm. There is no throttle control. Use the Auto Idle switch on the generator to control engine speed.

Note: *The battery must have the appropriate charge (nine volts minimum) for the generator governor to perform properly. If the generator starts but will not run at speed, check battery charge.*

2.14 Before Starting

2.14.1 Read and understand safety and operating instructions at beginning of this manual.

2.14.2 Read and understand the meanings of all warning and operating labels.

2.14.3 Make sure that a battery has been installed. See *Recommended Battery*.

2.14.4 Check:

- oil level in engine.
- fuel level.
- condition of air cleaner.
- tightness of external fasteners.
- condition of fuel lines.

2.15 To Run Generator

Follow instructions below and read starting and stopping instuctions found in Engine Owner's Manual.

2.15.1 Disconnect all loads from the generator and place the main circuit breaker in the open **(O)** position. Place auto idle switch to OFF **(O)** position.

2.15.2 Open fuel valve **(b1)**.

2.15.3 If engine is cold, pull choke control out **(a1)**. If engine is hot, push choke control in **(a2)**.

2.15.4 Turn key switch to the start position **(d3)** and hold until engine starts.

***NOTICE*:** Do not crank engine longer than 15 seconds at a time. Extended cranking can damage starter motor.

To start engine using manual start: Turn key switch to the run position **(d2)**. Pull starter rope **(c)** rapidly to start engine.

Leave key in run position **(d2)** while engine is running.

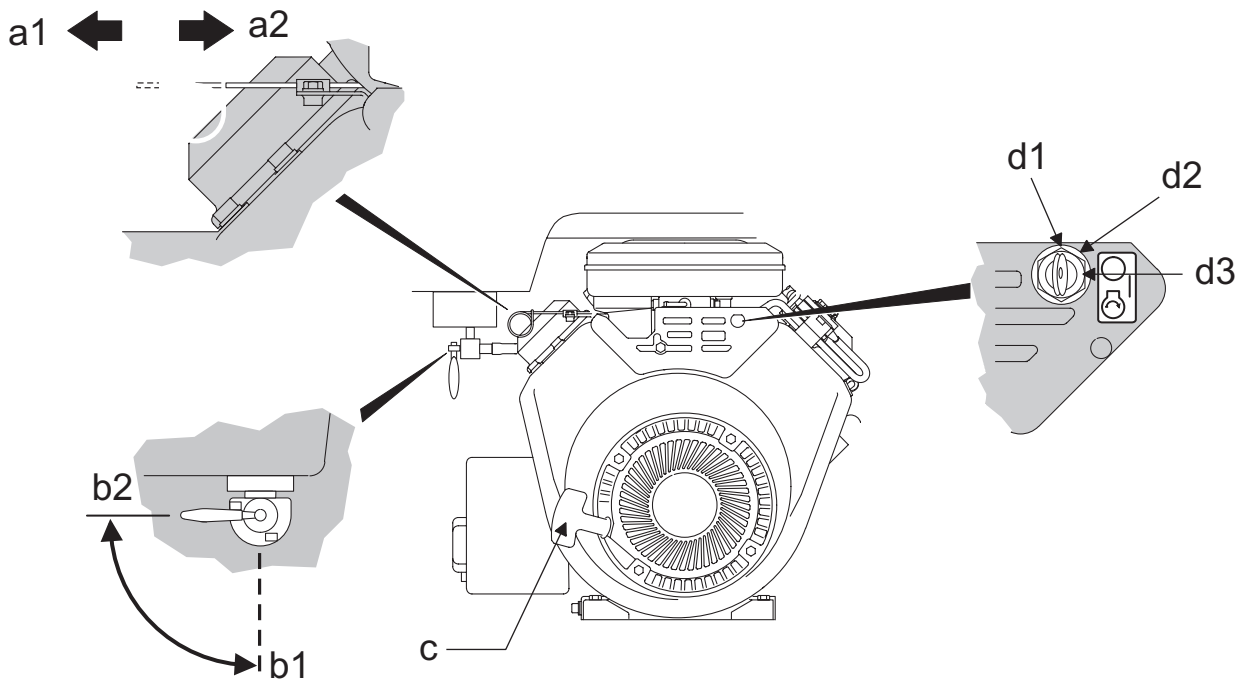
Note: *Turn the keyswitch to the OFF position when the engine is not running. Leaving the key in the RUN position with the engine off will drain the battery.*

Note: *Although the engine will start manually and will run without a battery, it will only idle and the generator will not load, as the governor requires that a battery be connected. See "Recommended Battery."*

Note: *The engine is equipped with a low oil protection system. If the oil level is low, the engine will not start. Check engine oil level if engine does not start.*

2.15.5 Push choke in as engine warms **(a2)**.

2.15.6 Place main circuit breaker in closed **(I)** position and place auto idle switch in ON **(I)** position. Allow engine to warm up and check function of GFI circuit breakers before attaching loads to generator (see *Ground Fault Circuit Interrupt*).



2.16 To Stop

2.16.1 Disconnect all loads from generator and place main circuit breaker in open position.

2.16.2 Turn engine switch to the stop position **(d1)**.

2.16.3 Close fuel valve **(b2)**.

Notes:

3. Maintenance

3.1 Engine Maintenance

The chart below lists basic machine and engine maintenance. Refer to your engine operator's manual for additional information on engine maintenance.

3.2 Periodic Maintenance Schedule

	Daily before starting	After first 5 hrs.	Every 50 hrs.	Every 100 hrs.	Every year
Check fuel level.	■				
Check engine oil level.	■				
Inspect fuel lines.	■				
Inspect air filter. Clean as needed.	■				
Check external hardware.	■				
Change engine oil.*		■	■		
Check shockmounts. Replace when necessary.				■	
Replace oil filter.*		■		■	
Check and clean spark plug.				■	
Replace air cleaner.*				■	
Check and adjust valve clearances.*					■
Replace in-line fuel filter.*					■

* Service more frequently in dusty conditions

3.3 Engine Lubrication

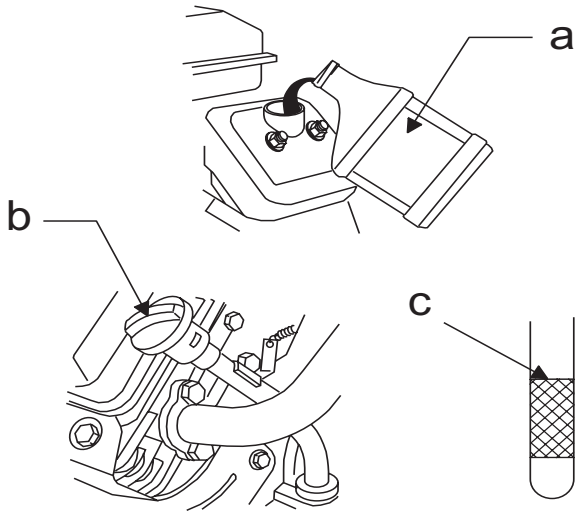
Check engine oil level daily, before starting engine. Add oil as required.

To check oil level:

3.3.1 Place generator on a level surface. Clean area around oil fill and remove dipstick.

3.3.2 Pour oil **(a)** slowly, checking oil level occasionally with dipstick.

3.3.3 Fill to full mark on dipstick **(c)**. DO NOT overfill.
When measuring oil level, screw dipstick firmly in place until cap bottoms on tube **(b)**.



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3.4 Oil Filter

Replace oil filter every 100 hours of operation.

3.4.1 Drain engine oil and replace with fresh oil before removing used oil filter.

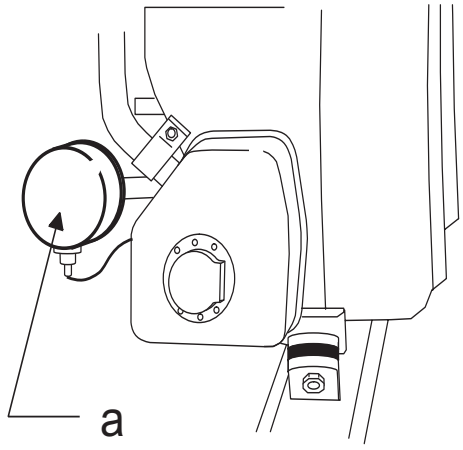
Note: *In the interests of environmental protection, place a plastic sheet and a container under the machine to collect any liquid which drains off. Dispose of this liquid in accordance with environmental protection legislation.*

3.4.2 Remove used filter, and before installing new filter, lightly oil filter gasket with fresh, clean engine oil.

3.4.3 Screw filter **(a)** on by hand until gasket makes contact, then tighten an additional 1/2 to 3/4 turn.

3.4.4 Start and run engine to check for leaks.

3.4.5 Stop engine. Recheck oil level and add oil if required (see *Engine Lubrication*).



3.5 Air Cleaner

Service air cleaner frequently to prevent carburetor malfunction.

***NOTICE*:** NEVER run engine without air cleaner. Severe engine damage will occur.

WARNING

NEVER use gasoline or other types of low flash point solvents for cleaning the air cleaner. A fire or explosion could result.

The engine is equipped with a dual element air cleaner.

To service air cleaner:

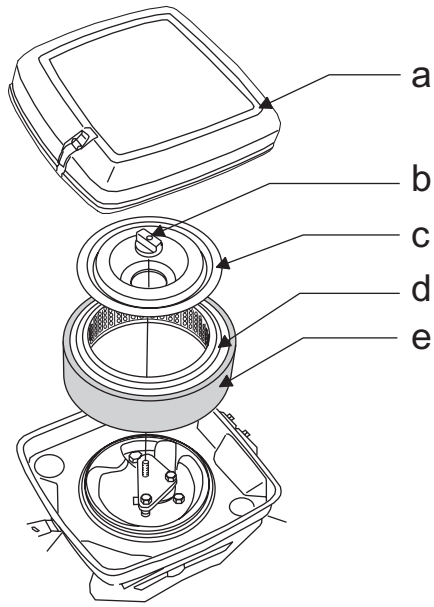
3.5.1 Remove cover **(a)**, knob **(b)**, and retaining plate **(c)**.

3.5.2 Remove foam precleaner **(d)** from filter cartridge **(e)**.

3.5.3 Wash precleaner in liquid detergent and water. Squeeze dry in a clean cloth. Saturate precleaner in engine oil; squeeze out excess oil. Replace precleaner if it is damaged or heavily soiled.

3.5.4 To clean cartridge, remove and tap lightly on a flat surface. Replace cartridge if it is damaged or heavily soiled.

Note: *Do not use petroleum solvents to clean precleaner or cartridge. Petroleum type solvents will damage them. Do not use pressurized air to clean cartridge. Pressurized air can also damage the cartridge.*



3.6 Spark Plug

Clean or replace the spark plug as needed to ensure proper operation. Refer to your engine operator's manual.

WARNING

The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Do not touch the muffler while it is hot.

Note: *Refer to section "Technical Data" for the recommended spark plug type and the electrode gap setting*.

3.6.1 Remove the spark plug and inspect it.

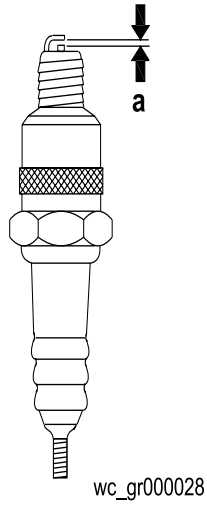
3.6.2 Replace the spark plug if the insulator is cracked or chipped.

3.6.3 Clean the spark plug electrodes with a wire brush.

3.6.4 Set the electrode gap **(a)**.

3.6.5 Tighten the spark plug securely.

***NOTICE*:** *A loose spark plug can become very hot and may cause engine damage*.



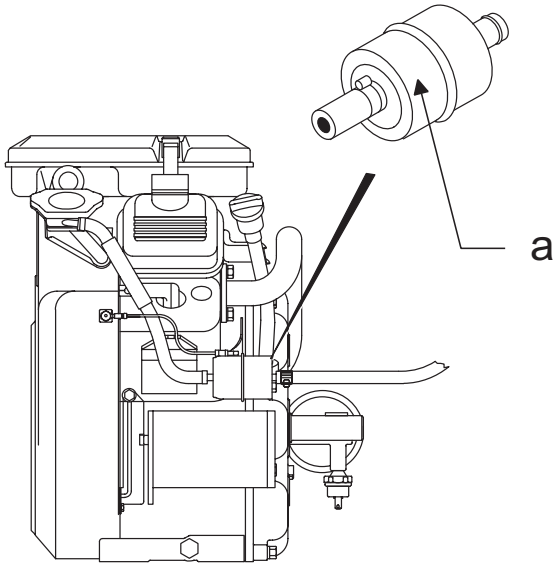
3.7 Fuel Filter

Check fuel lines and fittings daily for cracks or leaks. Replace as needed.

Change in-line fuel filter **(a)** once a year.

WARNING

Allow engine to cool, and close fuel valve before replacing fuel filter.



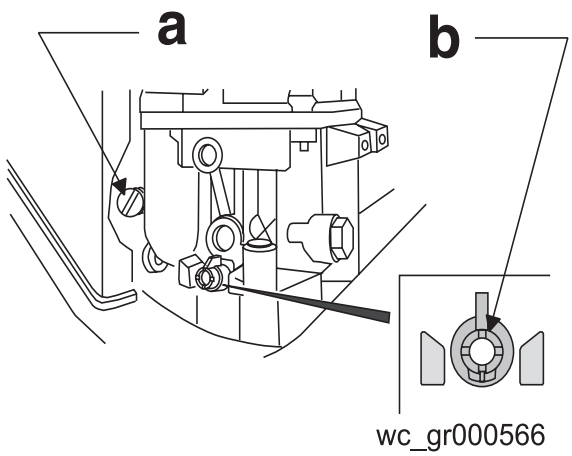
3.8 Carburetor Adjustment

Note: *Air cleaner must be in place and engine warm when making adjustments to carburetor.*

Only minor adjustments to carburetor are possible. Adjust mixture screw **(b)** between limits to obtain best acceleration from idle to full speed.

Adjust idle speed screw **(a)** with engine running and auto idle switch on. Adjust auto idle speed to 2200 rpm.

Note: *To avoid excessive vibration and to maintain adequate cooling ability, do not set the engine auto idle speed lower than 2200 rpm.*



3.9 Storage

Before storing generator for a long period of time:

3.9.1 Change the engine oil.

3.9.2 Disconnect the fuel line from the carburetor. Place open end of fuel line into a suitable container and open fuel valve to drain fuel from tank.

WARNING

Gasoline is extremely flammable. Drain fuel tank in a well-ventilated area. DO NOT drain tank in an area with flames or sparks.

3.9.3 Loosen the drain screw on the carburetor and drain any remaining fuel from carburetor.

3.9.4 Remove the spark plug and pour approximately 1 ounce (30 ml) of clean engine oil into the cylinder. Crank the engine a few turns to distribute the oil to the inside of the cylinder walls.

3.9.5 Pull the starter rope slowly until resistance is felt and leave handle in this position. This ensures that the intake and exhaust valves are closed.

3.9.6 Store generator in a clean, dry area. See engine owner's manual.

3.10 Transporting

Let the engine cool before transporting the generator or storing it indoors, to avoid burns or fire hazards.

When transporting the generator:

3.10.1 Turn the engine fuel valve to the OFF position.

3.10.2 Position the generator level to prevent fuel from spilling.

3.10.3 Secure the generator by tying it down with a suitable rope.

When transporting the machine by hand, be sure to employ manpower commensurate with the weight of the machine. To avoid back injury when lifting the machine, bend the knees to pick it up rather than bending your back only.

3.11 Troubleshooting

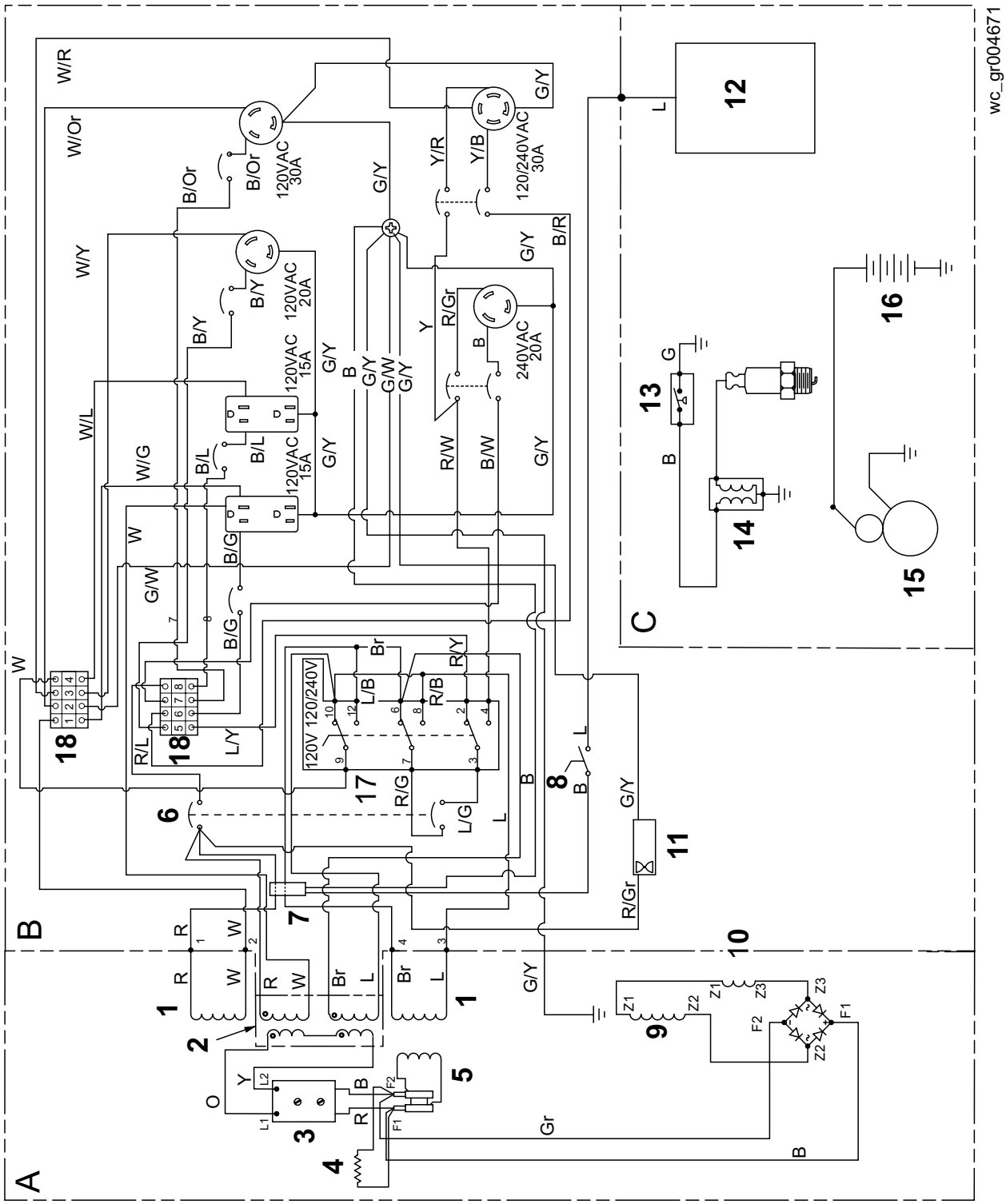
Before ordering repairs, carefully read through this manual, then repeat the inspection. If the problem remains, contact your nearest dealer or Wacker representative.

Problem / Symptom	Reason / Remedy
If engine doesn't start, check that:	• Engine switch is on "Start". • Fuel valves under fuel tank and on engine are open. • Fuel tank has fuel. • Choke lever is in correct position. Choke should be closed when starting a cold engine. • All loads are disconnected from generator. • Spark plug is in good condition. • Spark plug cap is tight. • Engine oil level is adequate. • Battery is charged and connected properly.
If engine starts but there is no power at receptacles, check that:	• Circuit breaker is closed. • Connector from generator to control panel is tight. • Battery is charged and connected properly.

3.12 Wire Colors

Wire Colors							
B	Black	R	Red	Y	Yellow	Or	Orange
G	Green	T	Tan	Br	Brown	Pr	Purple
L	Blue	V	Violet	Cl	Clear	Sh	Shield
P	Pink	W	White	Gr	Gray	LL	Light blue

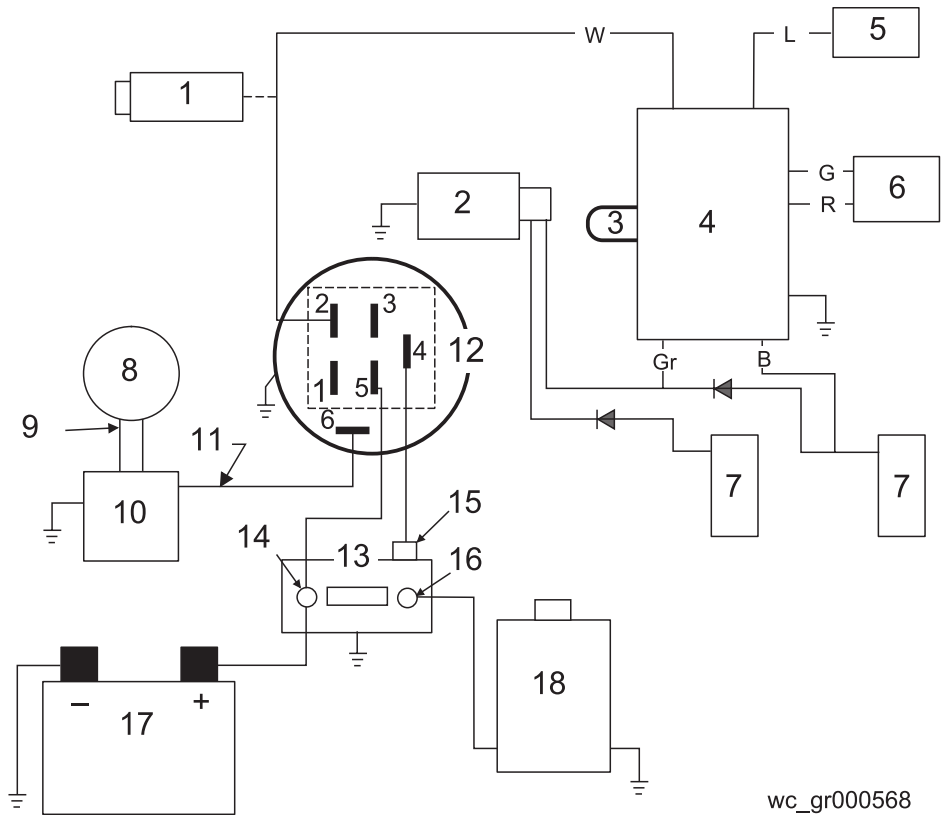
3.13 Generator Wiring Schematic



Ref.	Description	Ref.	Description	Ref.	Description
A	Generator	B	Control box	C	Engine

Ref.	Description	Ref.	Description
1	Main stator winding	10	Choke
2	Transformer	11	Hour meter
3	Auto Voltage Regulator (AVR)	12	Engine module
4	Resistor (GPS 9700 only)	13	Oil level switch
5	Rotor winding	14	Coil
6	Circuit breaker	15	Starter
7	Auto idle unit	16	Battery
8	Auto idle switch	17	Voltage selector switch (VSS)
9	Auxiliary stator winding	18	Terminal block

3.14 Engine Wiring Diagram



Ref.	Description	Ref.	Description
1	Carburetor solenoid	10	Regulator rectifier
2	Stop switch terminal	11	DC output wire
3	50 Hz. loop (GPS 8500=yellow, GPS 9700=red)	12	Key switch
4	Module	13	Solenoid
5	Idle down device	14	Battery terminal
6	Actuator	15	Solenoid tab terminal
7	Ignition coils	16	Starter terminal
8	Alternator	17	Battery
9	AC output wires	18	Starter motor

4. Technical Data

4.1 Generator

Item No.		GPS 8500	GPS 9700
Generator			
Maximum Output	kW / kVA	8.5 / 8.5	9.7 / 9.7
Continuous Output	W	8.2	9.3
Type		Dual voltage, single phase, brush-type system	
AC Voltages Available	volts phase	120 / 240 1ø	
Frequency	Hz	60	
Power Factor		1.0	
AC receptacles: 120V GFI duplex 120V GFI duplex 120V twist lock 120V twist lock 240V twist lock 120/240V twist lock	amp	 20 20 20 30 20 30	
Continuous Current at 120V	amp	68	77.5
L x W x H	mm (in.)	800 x 638 x 603 (31.5 x 25.125 x 23.75)	
Weight (dry)	Kg (lbs.)	97 (214)	99 (218)

4.2 Engine

Engine power rating

Gross power rating per SAE J1995. Actual power output may vary due to conditions of specific use.

Item No.		GPS 8500	GPS 9700
Engine			
Engine type		2 cylinder, 4-cycle, air-cooled, gasoline engine	
Engine make		Briggs and Stratton	
Engine model		Vanguard 305447	Vanguard 356447
Max. rated power @ rated speed	kW (Hp)	11.9 (16) @ 3600 rpm	13.4 (18) @ 3600 rpm
Displacement	cm^3 (in^3)	480 (29.3)	570 (34.75)
Spark plug		Champion RC12YC	
Electrode gap	mm (in.)	0.76 (0.030)	
Starter	type / V	Electric / 12	
Alternator	amp	16	
Engine speed - operating	rpm	3600	
Auto idle sSpeed	rpm	2200	
Valve clearance (cold)	mm (in.)	0.10–0.16 (0.004–0.006)	
Air cleaner	type	Dual element	
Battery	V/size/CCA	12 / 22NF / 230	
Engine lubrication	oil grade service class	SAE 10W30 SG, SF, or SE	
Engine oil capacity	l (qts.)	1.6 (1.7)	
Fuel	type	Regular unleaded gasoline	
Fuel tank capacity	l (gal.)	28 (7.4)	
Fuel consumption	l (gal.)/hr.	5.03 (1.33)	6.21 (1.64)

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