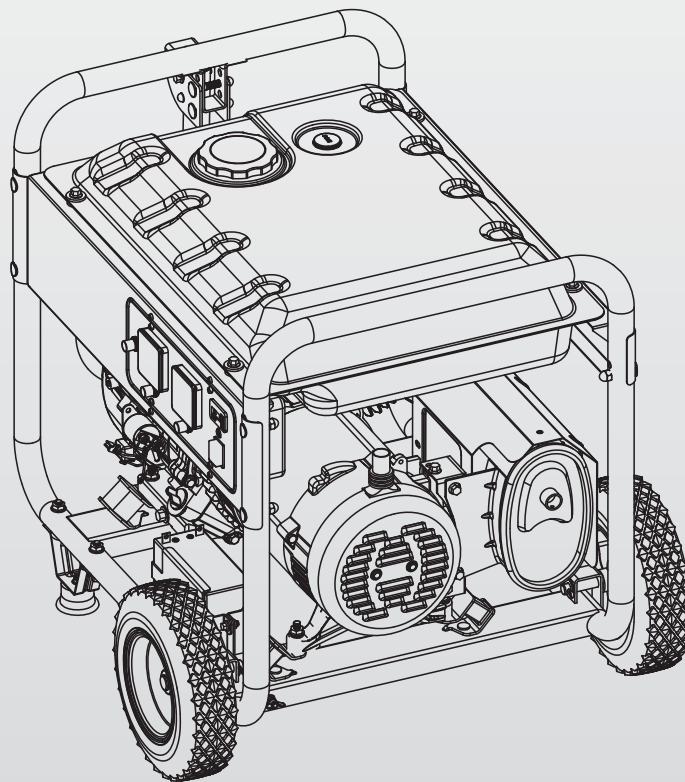




Owner's Manual

50 Hz, GP Series Portable Generator



⚠ DANGER!

- ⚠ DEADLY EXHAUST FUMES! ONLY use OUTSIDE far away from windows, doors and vents!**
- ⚠ NOT INTENDED FOR USE IN CRITICAL LIFE SUPPORT APPLICATIONS.**
- ⚠ SAVE this Manual. Provide this manual to any operator of the generator.**

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NOTE:

This list of Frequently Asked Questions (FAQs) are the frequently asked questions pertaining to ALL portable models

Some questions may not be applicable to the model covered in this publication.

FUEL INFORMATION

- Q: What is the proper fuel to use in my generator?
- A: We recommend regular unleaded gasoline. Do not use E85 gasoline or mix oil with gasoline. Premium grade fuel can be used, but is not required and will not improve performance or output.
- Q: What needs to be done to the fuel before extended storage?
- A: Fuel that is not going to be used- even for short periods of time should be treated with fuel stabilizer to slow the rate of deterioration, gumming or varnish formation. Following the manufacturer's recommendations, treat the quantity of fuel remaining in the fuel tank. Open the fuel valve, start and operate the engine for 30 minutes. Close the fuel valve and operate until the engine stops. This circulates treated fuel through lines and carburetor. The fuel can be drained or left in the tank.
- Q: Can I convert my portable generator to run on a different fuel besides gasoline?
- A: We do not offer any type of fuel conversion kit for our portable generators. Aftermarket conversion kits are available on the Internet. However, if a customer decides to convert the fuel using an aftermarket kit, the warranty is void.
- Q: Can I use any type of gasoline?
- A: Gasoline with an octane rating of 87, with no more than 10% ethanol is preferred. Never use an E85 fuel or a mixture of oil and gasoline designated for two cycle engines. Utilizing a higher grade fuel will not yield any increase in power output.
- Q: The fuel capacity in my owner's manual seems incorrect.
- A: The fuel capacity listed is the total interior volume for the fuel tank. Air space is required to allow for expansion of the gasoline during warmer temperatures. So the actual amount of gasoline that will fit in the tank is typically less than the stated fuel tank capacity.
- Q: How do I drain the fuel?
- A: Actually, treating the fuel for storage is a better option. The treated fuel can then be left in the tank. Fuel can be removed through the fill opening using an automotive style siphon. Exercise all appropriate cautions when handling fuel.

MAINTENANCE & OIL INFORMATION

- Q: I am out of the recommended oil, but I need to operate my generator. What are my options?
- A: In an emergency, oil with an API rating of SH, SJ, SK, CF-4, ILSAC, GF-1, GF-2 or GF-4 can be used. It can be mineral, semi-synthetic or synthetic. Any of the following viscosities are permissible: SAE 5W-30, 10W-30, 10W-40, 20W-50, 30 or 40 weight. Change the oil as soon as possible using Generac oil, per the owner's manual recommendations.
- Q: If no dipstick is included on my model's engine. How do I know when I have put enough oil in my portable generator?
- A: The customer should fill the oil to the bottom of the cap's threads on the crankcase. The oil should always be checked and filled when your engine has cooled completely.
- Q: Should I screw the oil cap/ dipstick all the way down when checking the oil level?
- A: When checking the oil, the oil fill cap/ dipstick should be screwed in all the way. The oil level should be checked and filled when the engine has cooled completely.
- Q: The manual says the oil capacity is 1.7 quarts. When I add 1.7 quarts, it doesn't reach the threads on the crankcase.
- A: Add enough oil to reach the bottom the threads on the crankcase, even if it is more than the manual recommends.

OPERATION

- Q: The hourmeter said it was time to service the air filter. After the service has been performed, does anything need to be done to the hourmeter?
- A: The hourmeter will alert the owner continuously for one hour before and until one hour after scheduled maintenance has been reached. This includes oil changes (at 100 hours) or air filter service (at 200 hours). As hours of operation continue to accumulate, the hourmeter will automatically reset itself until the next 100 or 200 hour service interval is reached. See the Hourmeter section of your owner's manual for additional information. The hourmeter on some generator models have a reset button that allows the operator to move between maintenance intervals and reset intervals by holding the reset button for nine seconds. NOTE: Not all generator models have the reset button.
- Q: How do I adjust the valve clearance?
- A: Valve clearance adjustment is critical to proper engine operation and requires special tools and training. Instructions are covered in the Valve Clearance Adjustment section of your owner's manual. However, if you are uncomfortable performing this service procedure, have your dealer maintain the generator's valve clearance at the intervals specified.

Frequently Asked Questions

Q: Can I operate my generator in the rain?

A: Portable generators should never be operated inside an enclosed space or contrary to any provision or warning found in your Owner's Manual. However, portable generators are intended to be used during extreme weather and for the sensitive electronics on them, it is best if some sort of open covering can be used to protect it from direct rain or snow. Great options would be a car port or boat canopy with four open sides or a tarp hung from a tree. It is very important to provide adequate ventilation for the generator, so any sort of protection should be at least five feet from any side (including the top of the unit) while in use. Additionally, a portable generator should always be stored inside when not in use to prevent unnecessary wear and tear. BE ADVISED, the generator should NEVER be used in any enclosed space including, without limitation, a shed, home, garage, trailer or vehicle, even if the doors are left open, as this can be a serious fire hazard and carbon monoxide risk.

Q: How long can I operate the generator? Does it need a "break"?

A: Your generator can be operated continually. The highest priority is to maintain a proper oil level. Each time you add fuel, check the oil level as well. Add oil, if necessary, to keep the level at the upper mark on the dipstick. See the Checking Oil Level and Adding Fuel sections of your owner's manual for complete instructions on adding fuel and oil.

Q: Is there anything special I need to do before I turn off my generator? Should I unplug my electrical devices?

A: Yes, remove all loads before turning the generator off. First, turn off all appliances, lights and items being powered by the generator. Then, unplug the items from the generator's receptacles and allow the generator to cool. Once you've done this, it is safe to turn the generator off. NEVER turn the generator off while loads are applied. Refer to the Generator Loads section of your owner's manual for complete instructions on adding and removing electrical devices.

Q: If the generator is being used, how do I connect or disconnect electrical devices?

A: NEVER start or stop the generator's engine with running electrical devices plugged into the generator. When the generator is turned off, you can only connect electrical devices that are turned off. When the generator is turned on, you may connect electrical devices that are turned on or off.

Q: How often should I start / operate my generator between outages?

A: Generac recommends starting a generator once a month and running the unit for about 30 minutes. Starting the unit monthly will help make sure that the generator is ready to turn in the event of an outage.

BATTERY INFORMATION

Q: How often do I have to charge the generator's battery?

A: If the starter will not turn the engine over, charge the battery using the charger provided with your generator. The charger should be connected for no longer than 48 hours. Charging procedures are covered in the Battery Charging section of this Owner's Manual.

Q: My generator's battery will no longer accept a charge. What is the procedure for replacing a battery?

A: Complete battery replacement procedures can be found in the Battery Replacement section of your owner's manual.

Q: How do I charge my portable generator's battery?

A: Most portable generators do not charge their batteries when running. Every electric start generator comes with an external charger. The customer should charge the battery at least once a month for 24-48 hours in preparation for usage. If the battery is dead, most of the portables have a recoil backup (pull start). In an emergency situations, the customer can charge the battery by plugging the charger cord into the receptacle on the generator while it is running. This is not recommended for typical operation.

GENERAL INFORMATION

Q: What are the decibel levels of portable generators?

A: Our portable generators feature a low-tone muffler straight from the factory. We do not offer a kit or recommend making any changes to the generator or exhaust system, as that can void the warranty.

Q: Can I add electric start to my pull start generator?

A: Generac does not offer any kits or accessories to add electric start to a pull start generator. Making any changes can void the generator warranty.

Q: Does my warranty cover travel/ pickup for my generator?

A: No. The dealer will not come out to the customer or pick up the portable generator from the customer unless the customer has paid them to do so.

Q: What is "idle control" and what does it offer the owner?

A: Most of our portable generators do not have idle control. The engine will run at full speed in order to accept any immediate loads. Some of the new XP and XT models do offer idle control. The iX inverter series models have "eco-mode" which allows the engine to run at a lower speed.

INTRODUCTION

Thank you for purchasing this model by Generac Power Systems, Inc. This model is a compact, high performance, air-cooled, engine driven generator designed to supply electrical power to operate electrical loads where no utility power is available or in place of utility due to a power outage.

READ THIS MANUAL THOROUGHLY

If any portion of this manual is not understood, contact the nearest Authorized Dealer for starting, operating and servicing procedures.

The operator is responsible for proper and safe use of the equipment. We strongly recommend that the operator read this manual and thoroughly understand all instructions before using the equipment. We also strongly recommend instructing other users to properly start and operate the unit. This prepares them if they need to operate the equipment in an emergency. Save these instructions for future reference. **If you loan this unit to someone, ALWAYS loan these instructions to the individual as well.**

The generator can operate safely, efficiently and reliably only if it is properly located, operated and maintained. Before operating or servicing the generator:

- Become familiar with and strictly adhere to all local, state and national codes and regulations.
- Study all safety warnings in this manual and on the product carefully.
- Become familiar with this manual and the unit before use.

The manufacturer cannot anticipate every possible circumstance that might involve a hazard. The warnings in this manual, and on tags and decals affixed to the unit are, therefore, not all inclusive. If using a procedure, work method or operating technique that the manufacturer does not specifically recommend, ensure that it is safe for others. Also make sure the procedure, work method or operating technique utilized does not render the generator unsafe.

THE INFORMATION CONTAINED HEREIN WAS BASED ON MACHINES IN PRODUCTION AT THE TIME OF PUBLICATION. GENERAC RESERVES THE RIGHT TO MODIFY THIS MANUAL AT ANY TIME.

SAFETY RULES

Throughout this publication, and on tags and decals affixed to the generator, DANGER, WARNING, CAUTION and NOTE blocks are used to alert personnel to special instructions about a particular operation that may be hazardous if performed incorrectly or carelessly. Observe them carefully. Their definitions are as follows:

⚠ DANGER!

INDICATES A HAZARDOUS SITUATION OR ACTION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

⚠ WARNING!

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

⚠ CAUTION!

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

NOTE:

Notes contain additional information important to a procedure and will be found within the regular text body of this manual.

These safety warnings cannot eliminate the hazards that they indicate. Common sense and strict compliance with the special instructions while performing the action or service are essential to preventing accidents.

Four commonly used safety symbols accompany the **DANGER**, **WARNING** and **CAUTION** blocks. The type of information each indicates is as follows:

⚠ This symbol points out important safety information that, if not followed, could endanger personal safety and/or property of others.

💣 This symbol points out potential explosion hazard.

🔥 This symbol points out potential fire hazard.

⚡ This symbol points out potential electrical shock hazard.

	⚠ CAUTION
	Hearing protection recommended.
	PRECAUCIÓN
	Se recomienda protección auditiva.
	MISE EN GARDE
	Protection auditive recommandée.

Safety Rules

GENERAL HAZARDS

- NEVER operate in an enclosed area, in a vehicle, or indoors EVEN IF doors and windows are open.
- For safety reasons, the manufacturer recommends that the maintenance of this equipment is carried out by an Authorized Dealer. Inspect the generator regularly, and contact the nearest Authorized Dealer for parts needing repair or replacement.
- Operate generator only on level surfaces and where it will not be exposed to excessive moisture, dirt, dust or corrosive vapors.
- Keep hands, feet, clothing, etc., away from drive belts, fans, and other moving parts. Never remove any fan guard or shield while the unit is operating.
- Certain parts of the generator get extremely hot during operation. Keep clear of the generator until it has cooled to avoid severe burns.
- Do NOT operate generator in the rain.
- Do not alter the construction of the generator or change controls which might create an unsafe operating condition.
- Never start or stop the unit with electrical loads connected to receptacles AND with connected devices turned ON. Start the engine and let it stabilize before connecting electrical loads. Disconnect all electrical loads before shutting down the generator.
- Do not insert objects through unit's cooling slots.
- When working on this equipment, remain alert at all times. Never work on the equipment when physically or mentally fatigued.
- Never use the generator or any of its parts as a step. Stepping on the unit can stress and break parts, and may result in dangerous operating conditions from leaking exhaust gases, fuel leakage, oil leakage, etc.
- On electric start models, disconnect the POSITIVE (+) battery cable from the engine starter OR the NEGATIVE (-) battery cable from the battery terminal, whichever is easier, before transporting the generator.

EXHAUST & LOCATION HAZARDS

- **Never operate in an enclosed area or indoors! NEVER use in the home, in a vehicle, or in partly enclosed areas such as garages, EVEN IF doors and windows are open! ONLY use outdoors and far from open windows, doors, vents, and in an area that will not accumulate deadly exhaust.**



- The engine exhaust fumes contain carbon monoxide, which you cannot see or smell. This poisonous gas, if breathed in sufficient concentrations, can cause unconsciousness or even death.
- Adequate, unobstructed flow of cooling and ventilating air is critical to correct generator operation. Do not alter the installation or permit even partial blockage of ventilation provisions, as this can seriously affect safe operation of the generator. The generator **MUST** be operated outdoors.
- This exhaust system must be properly maintained. Do nothing that might render the exhaust system unsafe or in noncompliance with any local codes and/or standards.
- Always use a battery operated carbon monoxide alarm indoors, installed according to the manufacturers instructions.
- If you start to feel sick, dizzy, or weak after the generator has been running, move to fresh air **IMMEDIATELY**. See a doctor, as you could have carbon monoxide poisoning.

ELECTRICAL HAZARDS

- The generator produces dangerously high voltage when in operation. Avoid contact with bare wires, terminals, connections, etc., while the unit is running, even on equipment connected to the generator. Ensure all appropriate covers, guards and barriers are in place before operating the generator.
- Never handle any kind of electrical cord or device while standing in water, while barefoot or while hands or feet are wet. **DANGEROUS ELECTRICAL SHOCK MAY RESULT.**
- Local electrical codes may also require proper grounding of the generator. Consult with a local electrician for grounding requirements in the area.
- Do not use worn, bare, frayed or otherwise damaged electrical cord sets with the generator.
- Before performing any maintenance on the generator, disconnect the engine starting battery (if equipped) to prevent accidental start up. Disconnect the cable from the battery post indicated by a NEGATIVE, NEG or (–) first. Reconnect that cable last.
- In case of accident caused by electric shock, immediately shut down the source of electrical power. If this is not possible, attempt to free the victim from the live conductor. **AVOID DIRECT CONTACT WITH THE VICTIM.** Use a non-conducting implement, such as a rope or board, to free the victim from the live conductor. If the victim is unconscious, apply first aid and get immediate medical help.

FIRE HAZARDS

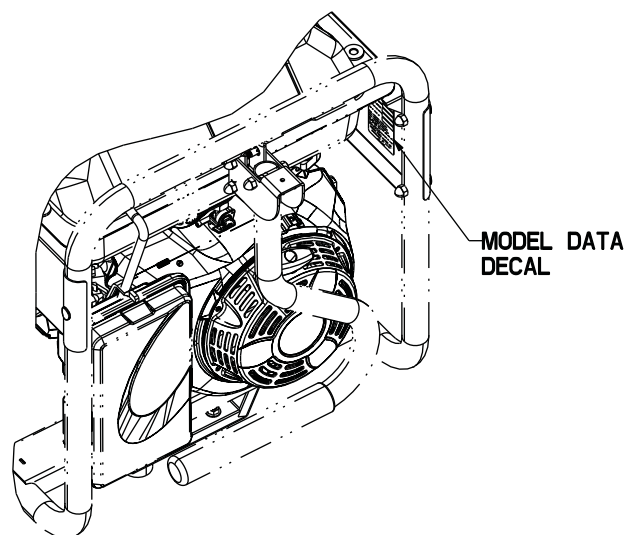
- **Gasoline is highly FLAMMABLE and its vapors are EXPLOSIVE. Do not permit smoking, open flames, sparks or heat in the vicinity while handling gasoline.**
- Never add fuel while unit is running or hot. Allow engine to cool completely before adding fuel.
- **Never fill fuel tank indoors.** Comply with all laws regulating storage and handling of gasoline.
- **Do not overfill the fuel tank. Always allow room for fuel expansion.** If tank is over-filled, fuel can overflow onto a hot engine and cause FIRE or an EXPLOSION. Never store generator with fuel in tank where gasoline vapors might reach an open flame, spark or pilot light (as on a furnace, water heater or clothes dryer). FIRE or EXPLOSION may result. Allow unit to cool entirely before storage.
- Wipe up any fuel or oil spills immediately. Ensure that no combustible materials are left on or near the generator. Keep the area surrounding the generator clean and free from debris and keep a clearance of five (5) feet on all side to allow for proper ventilation of the generator.
- Do not insert objects through unit's cooling slots.
- **Do not** operate the generator if connected electrical devices overheat, if electrical output is lost, if engine or generator sparks or if flames or smoke are observed while unit is running.
- Keep a fire extinguisher near the generator at all times.
- **Do not** operate in a hazardous location where there may be a risk of explosion of petrol fumes, leaking gas or explosive dusts.

REGISTRATION

Register your product online at www.generac.com to receive important product information or updates.

MODEL NO:	
SERIAL NO:	

Unit ID Location



1.1 UNPACKING

- Remove all packaging material.
- Remove separate accessory box.
- Remove the generator from carton.

1.1.1 ACCESSORY BOX (COMMON)

GP2600/2800

- 1-Owner's manual
- 1- Bottle of oil SAE 30
- 1-Frame Foot (E)
- 2-Wheels (H)
- 1-Axle (K)
- 1-Handle with Grip (L)
- 1-Plastic Spacer (M)
- 1-Handle Bracket (N)
- 1-Hardware bag (containing the following):
 - 2-M8 Flange Nuts (C)
 - 2-Rubber Feet (D)
 - 2-M8 x 16 Bolts (F)
 - 2-Cotter Pins (J)
 - 2-M8 x 40 Bolts (P)
 - 1-M6 x 40 Bolt (T)
 - 1-M6 Lock Nut (U)

GP5000/GP6000E/GP6500E

- 1-Owner's manual
- 1- Bottle of oil SAE 30
- 2-Frame Foot (E)
- 2-Wheels (H)
- 1-Handle Assembly (Q)
- 2-Long Carriage Head Bolts (A)
- 2-Flange Nuts (electric start only)
- 1-Battery Charger (electric start only)
- 1- Adapter Cable (if equipped)
- 1-Hardware bag (containing the following):
 - 4-M8 Flange Nuts (C)
 - 2-M6 Flange Nuts (S)
 - 2-Rubber Feet (D)
 - 4-M8 Bolts (F)
 - 2-M6 bolts (R)
 - 2-Cotter Pins (J)
 - 2-Acorn Nuts (B)
 - 2-Axle Pins (G)
 - 2-Washers (I)

1.2 ASSEMBLY

The generator requires some assembly prior to using it. If problems arise when assembling the generator, please call an authorized dealer at 1 800 333 28 for Australia and 09 269 1160 for New Zealand.

1.2.1 ASSEMBLING THE ACCESSORY KIT

Refer to the instructions below and Figures 1A through 1E to install the handle, feet, and wheels. Note: the handle components are already pre-assembled from the factory. The wheels are designed to greatly improve the portability of the generator. You will need the following tools to properly install the accessory kit:

- Ratchet and a 13 mm socket (GP5000/GP6000E/GP6500E)
- Ratchet and 10 mm and 12 mm Socket (GP2600/GP2800)
- 13mm box wrench (GP5000/GP6000E/GP6500E)
- 10 mm and 12 mm box wrench (GP6000E/GP6500E)
- Needle nose pliers

Handle (GP5000/GP6000E/GP6500E) (Figure 1A)

1. Install the handle assembly to the frame by using bolts (A) and nuts (B).

Handle (GP2600/GP2800)

2. Refer to Figure 1B to install the handle assembly as shown.
 - Install the handle bracket (N) to the frame using two Bolts (P) (if not already assembled).
 - Slide the plastic spacer (M) onto the handle assembly (L) then align with the holes in the handle bracket (N) (if not already assembled).
 - Secure the handle assembly (L) to the handle bracket (N) using the Bolt (T) and one hex flange nut (U).

Feet (Figure 1B & 1C)

3. Use nuts (C) to mount the rubber feet (D) to the foot bracket (E) (if not already assembled).
4. Mount the foot bracket (E) to the frame with two bolts (F) (Figure 1B) and 4 M8 flange nuts (Figure 1C).

Wheels (GP5000/GP6000E/GP6500E) (Figure 1D)

5. Slide axle pin (G) through wheel (H), washer (I), and through the bracket on the frame.
6. Secure axle pin (G) to the frame with the cotter pin (J).
7. Use a pliers and bend one tab of cotter pin (J) outward to lock into place.
8. Repeat steps 5, 6, & 7 for other wheel.

Wheels (GP2600/GP2800)

9. Refer to Figure 1E to install the wheels as shown.
 - Slide the axle (K) through the frame brackets.
 - Slide on the wheels (H) then install the cotter pins (J).

Figure 1A – Handle Assembly (GP5000/GP6000E/ GP6500E)

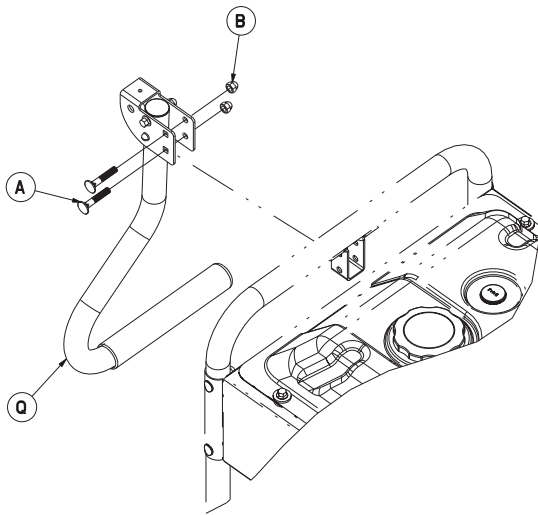


Figure 1B – Handle Assembly/Foot Assembly (GP2600/GP2800)

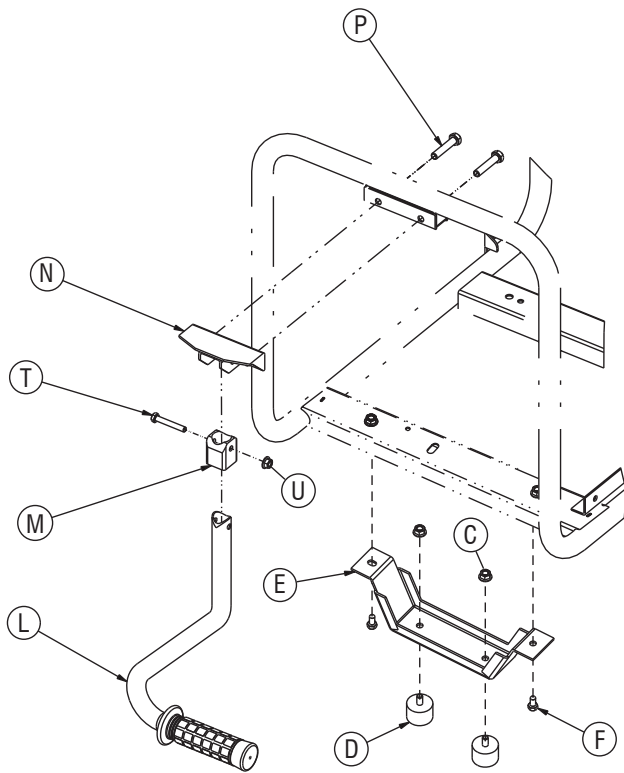


Figure 1C – Foot Assembly (GP5000/GP6000E/GP6500E)

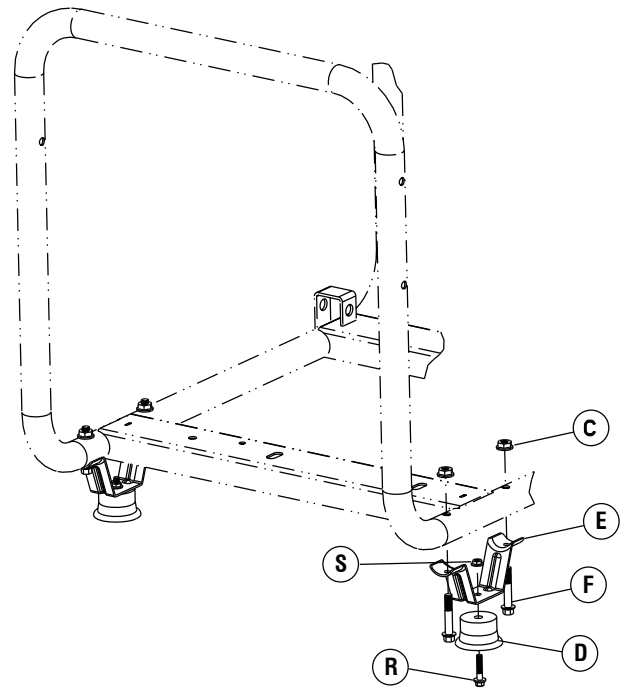


Figure 1D – Wheel Assembly (GP5000/GP6000E/ GP6500E)

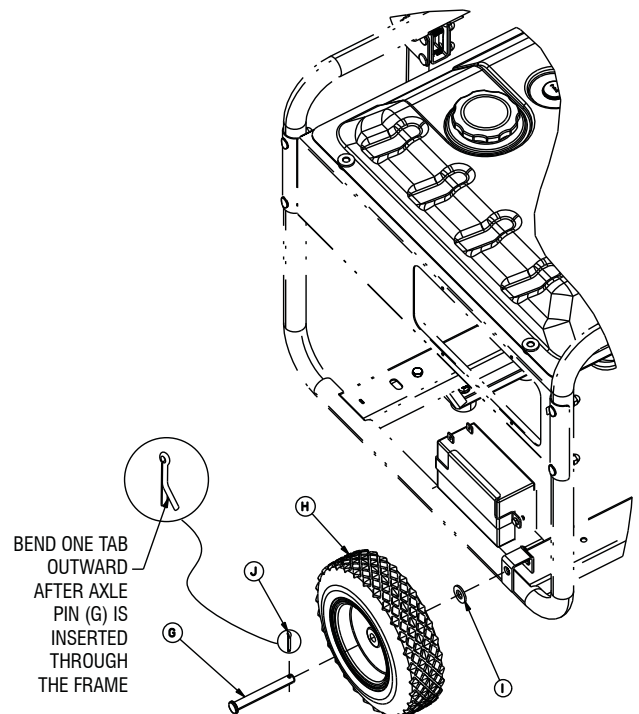
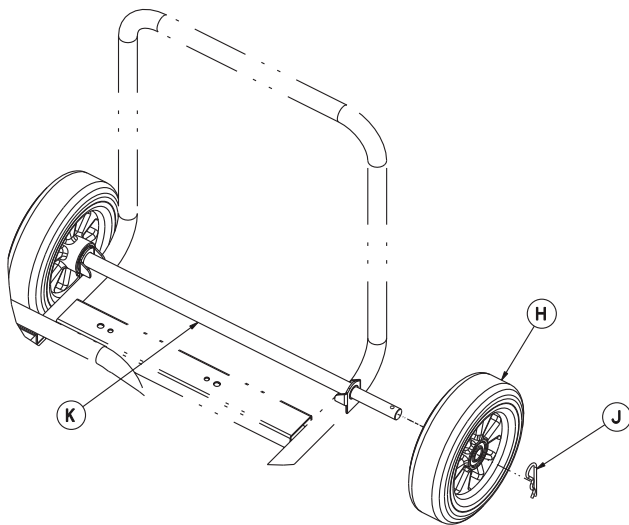


Figure 1E – Wheel Assembly (GP2600/GP2800)



1.2.2 BATTERY CABLE CONNECTION (ELECTRIC START ONLY)

The unit has been deliberately shipped with the battery cables disconnected. You will need a 10mm wrench to secure the battery cables.

To connect the battery (see Figure 15 for connection details):

1. Cut off cable ties securing battery cables and remove red covers from battery terminals.
2. First, connect the red cable to the positive (+) battery terminal with the bolt, lock washer and nut supplied.
3. Connect the black cable to the negative (-) battery terminal with the bolt, lock washer and nut supplied.
4. Make sure all connections are secure. Slide the rubber boots over the terminals and connection hardware.

NOTE:

If the battery is unable to start the engine, charge it with the 12V charger included in the accessory box (see the "Charging a Battery" section for details).

2.1 KNOW THE GENERATOR

Read the Owner's Manual and Safety Rules before operating this generator.

Compare the generator to Figures 2 through 4 to become familiarized with the locations of various controls and adjustments. Save this manual for future reference.

1. **230 Volt AC, 15 Amp, AS/NZS 3112 Receptacle** – Supplies electrical power for the operation of 230 Volt AC, 15 Amp, single-phase, 50 Hz electrical lighting, appliance, tool and motor loads.

3. **Circuit Breakers (AC)** – Each receptacle is provided with a push-to-reset circuit breaker to protect the generator against electrical overload.
4. **Oil Drain** – Use to drain engine oil.
5. **Air Filter** – Filters intake air as it is drawn into the engine.
6. **Choke Knob** – Used when starting a cold engine.
7. **Fuel Tank** – See generator Specifications for tank capacity.
8. **Grounding Lug** – Ground the generator to an approved earth ground here. See "Grounding the Generator" for details.
9. **Run/Stop Switch** – Controls the operation of the generator (pull start models).
- 9A. **Start Switch** – Used to start engine from the starter motor (electric start models only).
10. **Muffler** – Quiets the engine.
11. **Handle** – Pivot and retract for storage. Press the spring-loaded button to move handles (GP5000/GP6000E/GP6500E only).
12. **Gas Cap** – Fuel fill location.
13. **Fuel Gauge** – Shows fuel level in tank.
14. **Oil Fill** – Add oil here.
15. **Recoil Starter** – Use to start engine manually.
16. **Fuel Shut Off** – Valve between fuel tank and carburetor.
17. **Battery Charger Input** – This receptacle allows the capability to recharge the 12 volt DC storage battery provided with the 12 Volt Adaptor Plug Charger which is included in the Accessory Box. Located behind the battery charger input is a 1.50 Amp in-line fuse which is inside the control panel to protect the battery (electric start models only).
18. **Battery** – Powers the electric starter (electric start models only).
19. **Hourmeter** – Tracks hours of operation (GP5000/GP6000E/GP6500E only).
20. **Spark Arrestor** – Reduces fire hazards by containing sparks.

Figure 2A - Control Panel (GP5000)

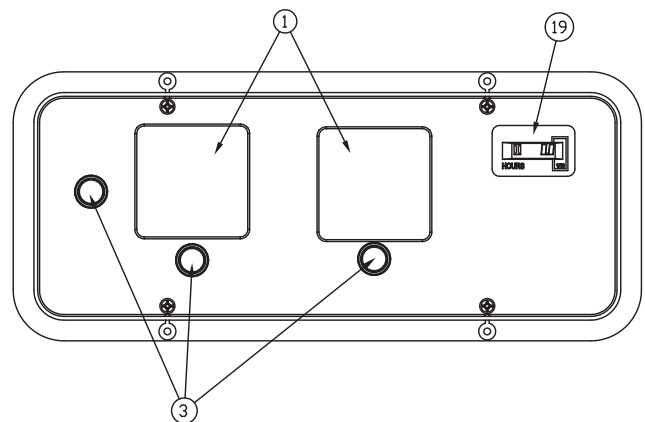


Figure 2B - Control Panel (GP6000E/GP6500E)

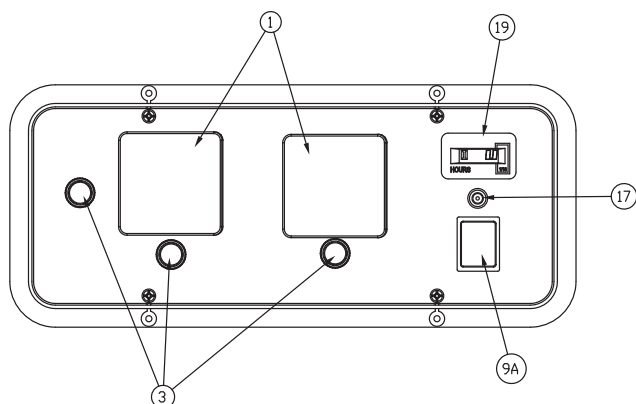


Figure 2C - Control Panel (GP2600/GP2800)

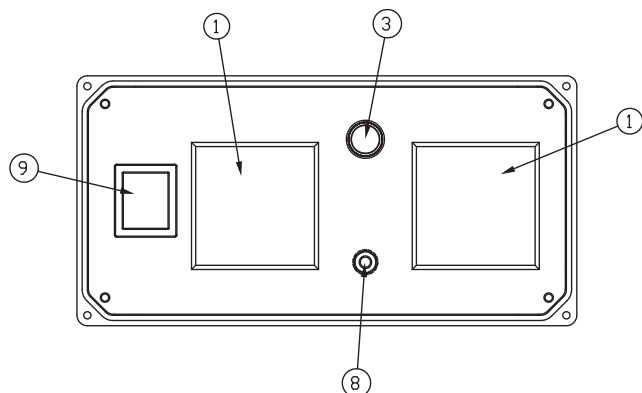


Figure 3A - Generator Controls (GP5000/GP6000E/GP6500E)

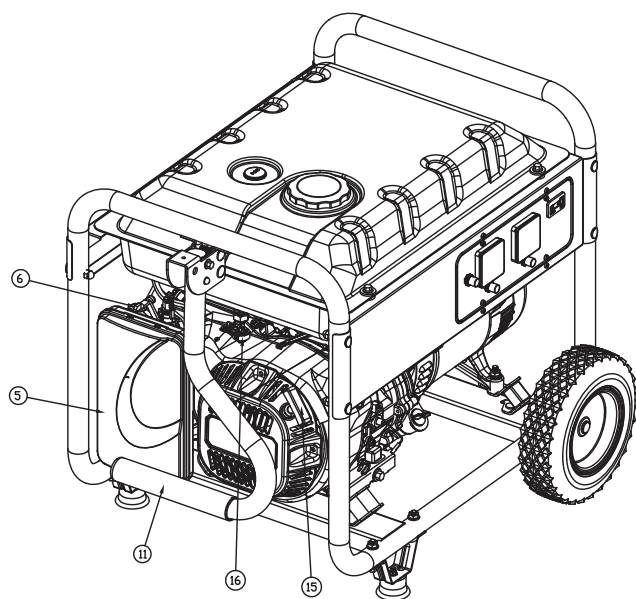


Figure 3B - Generator Controls (GP2600/GP2800)

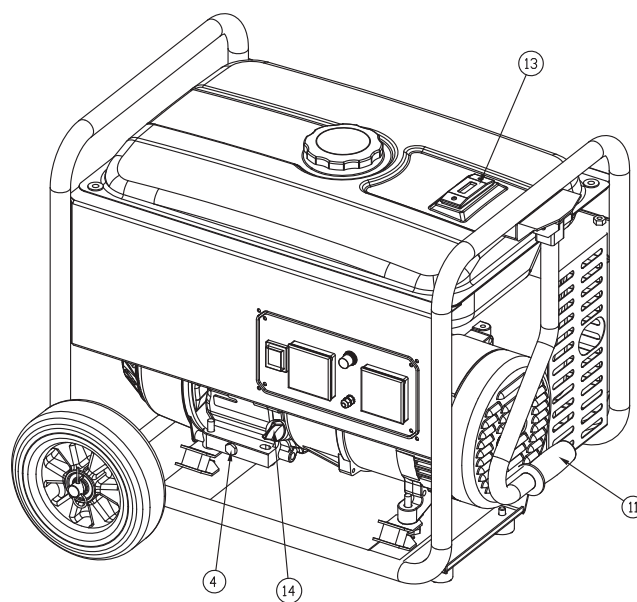


Figure 3C - Generator Controls (GP5000/GP6000E/GP6500E)

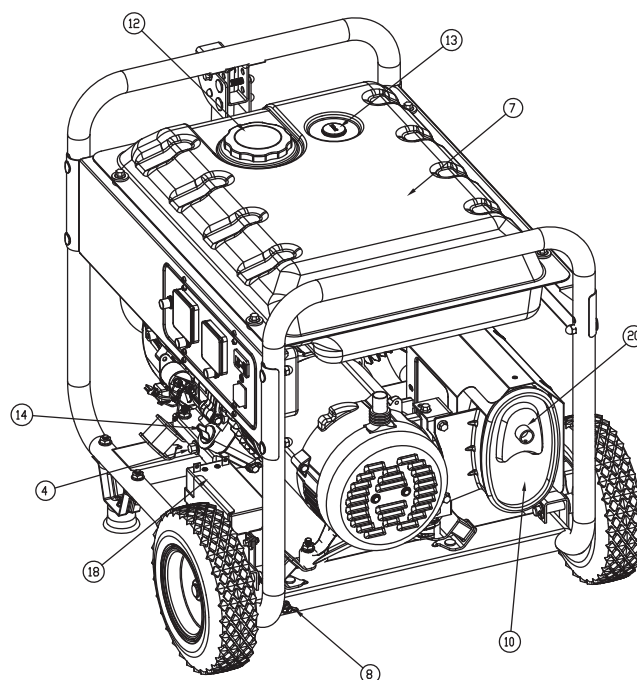


Figure 3D - Generator Controls (GP2600/GP2800)

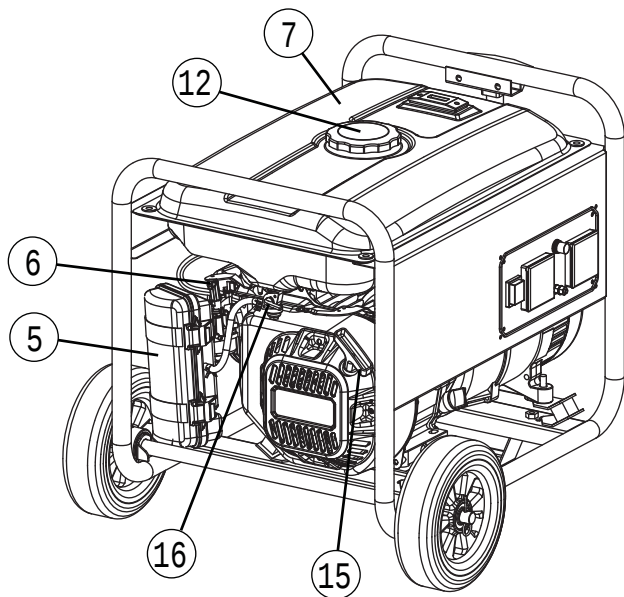
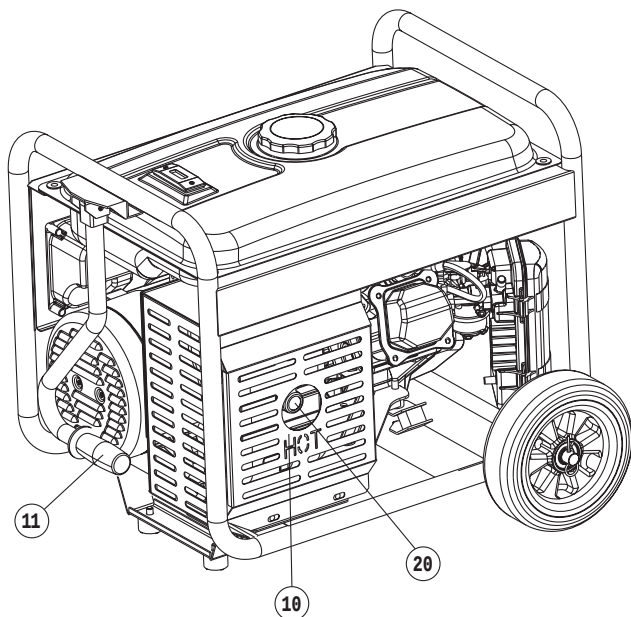


Figure 3E - Muffler (GP2600/GP2800)



2.2 HOURMETER (GP5000/GP6000E/GP6500E ONLY)

The Hourmeter tracks hours of operation for scheduled maintenance (Figure 4):

There will be a "CHG OIL" message every 100 hours. The message will flash one hour before and one hour after each 100 hour interval, providing a two hour window to perform service.

This message will actually begin flashing at 99 hours and disable itself at 101 hours again, providing a two hour window to perform the service.

Every 200 hours the "SVC" icon on the lower left hand corner of the display will flash. The message will flash one hour before and one hour after each 200 hour interval providing a two hour window to perform service.

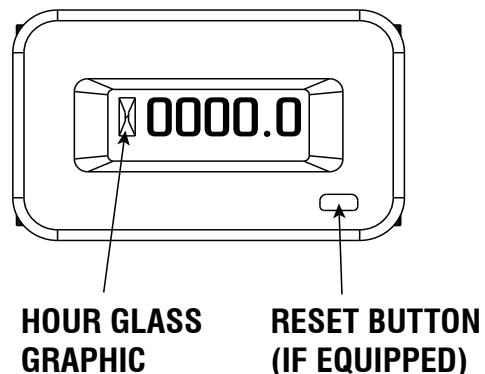
When the hour meter is in the Flash Alert mode, the maintenance message will always alternate with elapsed time in hours and tenths. The hours will flash four times, then alternate with the maintenance message four times until the meter resets itself.

- 100 hours - CHG OIL — Oil Change Interval (Every 100 hrs)
- 200 hours - SVC — Service Air Filter (Every 200 hrs)

NOTE:

The hour glass graphic will flash on and off when the engine is running. This signifies that the meter is tracking hours of operation.

Figure 4 – Hourmeter



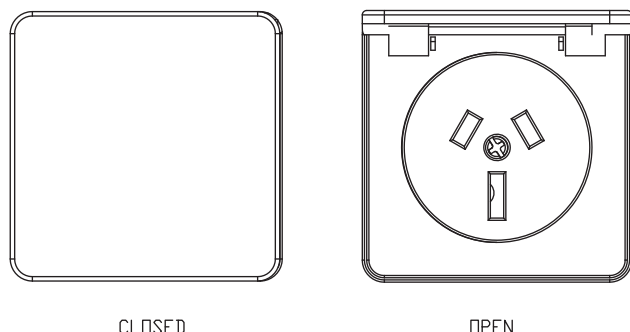
2.3 CONNECTION PLUGS

2.3.1 230 VAC, 15 AMP, AS/NZA 3112 F RECEPTACLE

This is a 230 Volt outlet (Figure 5) protected against overload by a 15 Amp push-to-reset circuit breaker. Use each socket to power 230 Volt AC, single phase, 50 Hz electrical loads requiring up to a combined 3,450 watts (3.4 kW) or 15 Amps of current. Use only high quality, well-insulated, 3-wire grounded cord sets rated for 230 Volts at 15 Amps (or greater).

Keep extension cords as short as possible, preferably less than 5 meters long, to prevent voltage drop and possible overheating of wires.

Figure 5 - 230 Volt AC, 15 Amp, AS/NZS 3112 Receptacle



2.4 HOW TO USE THE GENERATOR

To obtain contact information for the nearest authorized dealer, contact AllPower Industries. For Australia 1 800 333 28, for New Zealand 09 269 1160.

⚠ DANGER!

- ⚠ Never operate in an enclosed area or indoors! NEVER use in the home, in a vehicle, or in partly enclosed areas such as garages, EVEN IF doors and windows are open! ONLY use outdoors and far from open windows, doors, vents, and in an area that will not accumulate deadly exhaust.**
- ⚠ The engine exhaust fumes contain carbon monoxide, which can you cannot see or smell. This poisonous gas, if breathed in sufficient concentrations, can cause unconsciousness or even death.**
- ⚠ Adequate, unobstructed flow of cooling and ventilating air is critical to correct generator operation. Do not alter the installation or permit even partial blockage of ventilation provisions, as this can seriously affect safe operation of the generator. The generator MUST be operated outdoors.**
- ⚠ This exhaust system must be properly maintained. Do nothing that might render the exhaust system unsafe or in noncompliance with any local codes and/or standards.**
- ⚠ The manufacturer recommends installing a battery operated carbon monoxide alarm indoors, according to the manufacturers instructions.**



2.4.1 SYSTEM GROUND

The generator has a system ground that connects the generator frame components to the ground terminals on the AC output receptacles.

Special Requirements

There may be federal, state, safety or health administration regulations, local codes, or ordinances that apply to the intended use of the generator.

Please consult a qualified electrician, electrical inspector, or the local agency having jurisdiction:

- In some areas, generators are required to be registered with local utility companies.
- If the generator is used at a construction site, there may be additional regulations which must be observed.

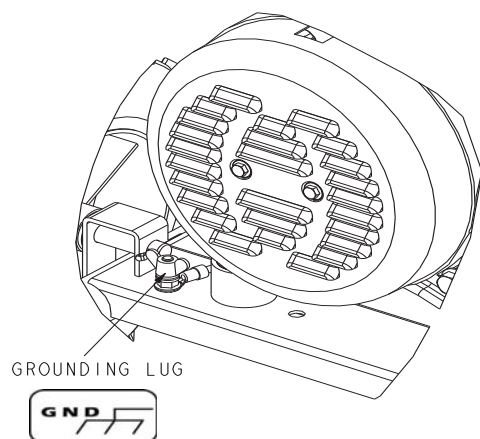
2.4.2 CONNECTING TO A BUILDING'S ELECTRICAL SYSTEM

Connections for standby power to a building's electrical system must be made by a qualified electrician. The connection must isolate the generator power from utility power or other alternative power sources and must comply with all applicable laws and electrical codes.

Grounding The Generator

Local electrical codes may require proper grounding of the unit (Figure 8). For that purpose, connecting a 2.59 mm stranded copper wire to the grounding lug and to an earth-driven copper or brass grounding rod (electrode) provides adequate protection against electrical shock. However, local codes may vary widely. **Consult with a local electrician for grounding requirements in the area.**

Figure 8 - Grounding the Generator



Proper grounding of the generator will help prevent electrical shock in the event of a ground fault condition in the generator or in connected electrical devices. Proper grounding also helps dissipate static electricity, which often builds up in ungrounded devices.

2.5 DON'T OVERLOAD THE GENERATOR

Overloading a generator in excess of its rated wattage capacity can result in damage to the generator and to connected electrical devices. Observe the following to prevent overloading the unit:

- Add up the total wattage of all electrical devices to be connected at one time. This total should NOT be greater than the generator's wattage capacity.
 - The rated wattage of lights can be taken from light bulbs. The rated wattage of tools, appliances and motors can usually be found on a data label or decal affixed to the device.
 - If the appliance, tool or motor does not give wattage, multiply volts times ampere rating to determine watts (volts x amps = watts).
 - Some electric motors, such as induction types, require about three times more watts of power for starting than for running. This surge of power lasts only a few seconds when starting such motors. Make sure to allow for high starting wattage when selecting electrical devices to connect to the generator:
1. Figure the watts needed to start the largest motor.
 2. Add to that figure the running watts of all other connected loads.

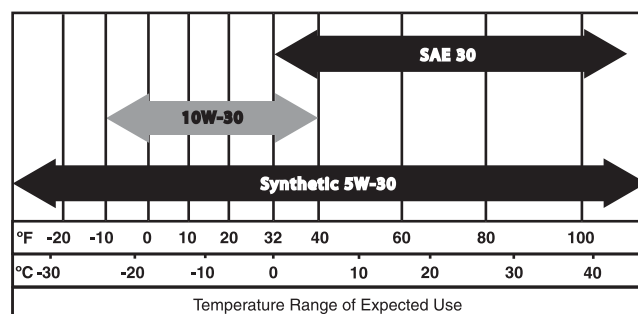
2.6 BEFORE STARTING THE GENERATOR

Prior to operating the generator, engine oil and gasoline will need to be added, as follows:

2.6.1 ADDING ENGINE OIL

Use no special additives. Select the oil's viscosity grade according to the expected operating temperature (also see chart).

- Above 32 °F (0 °C), use SAE 30
- Between 40 °F and -10 °F (4 and -32 °C), use 10W-30
- Synthetic 5W-30 for all temperature ranges



⚠ CAUTION!

⚠ Any attempt to crank or start the engine before it has been properly serviced with the recommended oil may result in an engine failure.

1. Place generator on a level surface (not to exceed 15° in any direction).
2. Clean area around oil fill and remove oil fill cap.
3. Slowly fill engine with oil until the dipstick reads full. Stop filling occasionally to check oil level.
4. Install dipstick and finger tighten securely.
5. Check engine oil level before starting each time thereafter.

2.6.2 ADDING GASOLINE

⚠ DANGER!

 **NEVER** fill fuel tank indoors. Avoid spilling gasoline on hot engine. Allow engine to cool entirely before adding fuel. **NEVER** fill fuel tank when engine is running or hot. **DO NOT** light a cigarette or smoke when filling the fuel tank. Gasoline is highly flammable and its vapors are **EXPLOSIVE**.

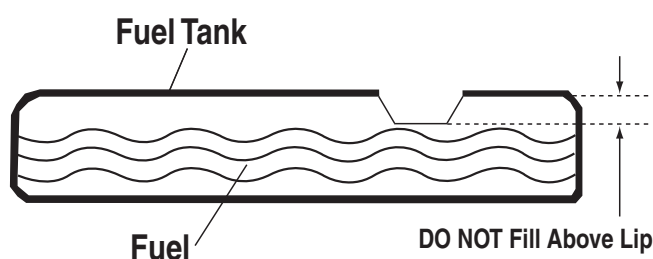
 **Do not overfill the fuel tank. Always leave room for fuel expansion. If the fuel tank is overfilled, fuel can over flow onto a hot engine and cause fire or an explosion. Wipe up any spilled fuel immediately.**

1. Use regular UNLEADED gasoline with the generator engine. Do not use any gasoline containing more than 10% ethanol. Do not mix oil with gasoline.
2. Clean area around fuel fill cap, remove cap.

3. Slowly add unleaded regular gasoline to fuel tank. **Be careful not to overfill** (Figure 9).
4. Install fuel cap and wipe up any spilled gasoline.

IMPORTANT: It is important to prevent gum deposits from forming in fuel system parts such as the carburetor, fuel hose or tank during storage. Fuel can attract moisture, which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer. See the "Storage" section. Never use engine or carburetor cleaner products in the fuel tank as permanent damage may occur.

Figure 9 - Fuel Tank



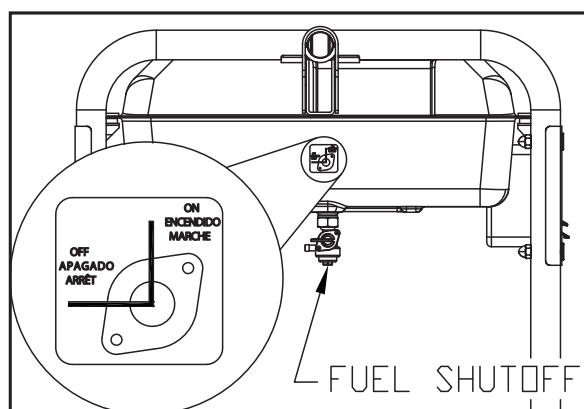
2.7 STARTING PULL START ENGINES

⚠ WARNING!

Never start or stop engine with electrical devices plugged into the receptacles AND devices turned on.

1. Unplug all electrical loads from the unit's receptacles before starting the engine.
2. Make sure the unit is in a level position (not to exceed 15° in any direction).
3. OPEN the Fuel Shut-off Valve (Figure 10).
4. Turn engine RUN/STOP switch to ON position (Figures 2C or 11).
5. Slide engine choke to the LEFT to FULL CHOKE position (Figure 12).

Figure 10 - Fuel Shut-off Valve



6. To start engine, firmly grasp the recoil handle and pull slowly until increased resistance is felt. Pull rapidly up and away.
7. When engine starts, move choke knob to 1/2-CHOKE position until engine runs smoothly and then fully into RUN position. If engine falters, move choke back out to 1/2-CHOKE position until engine runs smoothly and then to RUN position.

NOTE:

If engine fires, but does not continue to run, move choke lever to FULL CHOKE and repeat starting instructions.

IMPORTANT: Do not overload the generator. Also, do not overload individual panel receptacles. These outlets are protected against overload with push-to-reset-type circuit breakers. If amperage rating of any circuit breaker is exceeded, that breaker opens and electrical output to that receptacle is lost. Read "Don't Overload the Generator" carefully.

Figure 11 - Engine ON/OFF Switch

**ENGINE ON/OFF SWITCH
(GP5000 ENGINES ONLY)**

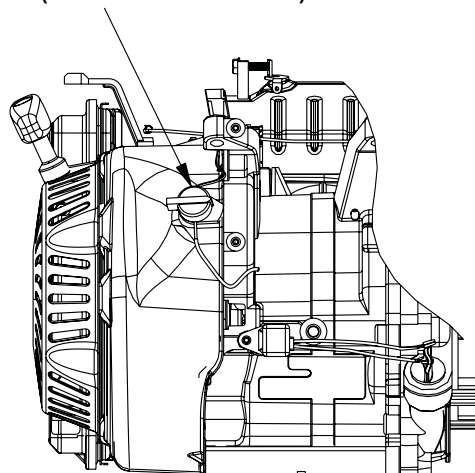
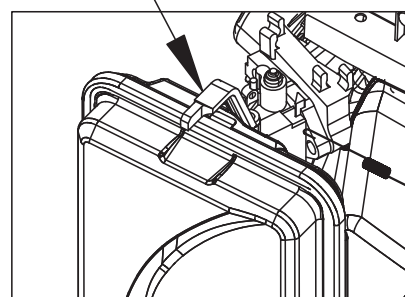


Figure 12 - Choke Position

**CHOKE LEVER
LEFT = CHOKE (START)
RIGHT = RUN**



2.8 STARTING ELECTRIC START ENGINES

WARNING!

 **Never start or stop engine with electrical devices plugged into the receptacles AND devices turned on.**

1. Unplug all electrical loads from the unit's receptacles before starting the engine.
2. Make sure the unit is in a level position (not to exceed 15° in any direction).
3. Open the fuel shut-off valve (Figures 10).
4. Move engine CHOKE lever to FULL CHOKE position (Figure 12).
5. To start engine, press and hold the Start/Run/Stop switch (control panel) in the "Start" position. The engine will crank and attempt to start. When the engine starts, release the switch to the run position.
6. When the engine starts, move choke knob to "1/2 Choke" position until the engine runs smoothly and then fully in to the "Run" position. If engine falters, move choke knob back out to "1/2 Choke" position until the engine runs smoothly and then to "Run" position.

2.8.1 MANUAL START

This generator is also equipped with a manual recoil starter which may be used if the battery is discharged.

NOTE:

The switch must be in the RUN position. Use one of the generator's receptacle outlets along with the included battery charger to charge the battery while the generator is running.

- To start manually, firmly grasp the recoil handle and pull slowly until increased resistance is felt. Pull rapidly up and away to start engine. Then follow the same choke sequence.

NOTE:

If engine fires, but does not continue to run, move choke lever to FULL CHOKE and repeat starting instructions.

IMPORTANT: Do not overload the generator. Also, do not overload individual panel receptacles. These outlets are protected against overload with push-to-reset-type circuit breakers. If amperage rating of any circuit breaker is exceeded, that breaker opens and electrical output to that receptacle is lost. Read "Don't Overload the Generator" carefully.

2.9 STOPPING THE ENGINE

1. Shut off all loads, then unplug the electrical loads from generator panel receptacles. Never start or stop the engine with electrical devices plugged in and turned on.
2. Let engine run at no-load for several minutes to stabilize the internal temperatures of engine and generator.
3. Move Run/Stop switch to OFF position.
4. Close fuel valve.

2.10 LOW OIL LEVEL SHUTDOWN SYSTEM

The engine is equipped with a low oil level sensor that shuts down the engine automatically when the oil level drops below a specified level. If the engine shuts down by itself and the fuel tank has enough gasoline, check engine oil level.

2.10.1 SENSING LOW OIL LEVEL

If the system senses a low oil level during operation, the engine shuts down. The engine will not run until the oil has been refilled to the proper level.

2.11 CHARGING THE BATTERY (ELECTRIC START UNITS ONLY)

DANGER!

 **Storage batteries give off explosive hydrogen gas while recharging. An explosive mixture will remain around the battery for a long time after it has been charged. The slightest spark can ignite the hydrogen and cause an explosion. Such an explosion can shatter the battery and cause blindness or other serious injury.**

DANGER!

 **Do not permit smoking, open flame, sparks or any other source of heat around a battery. Wear protective goggles, rubber apron and rubber gloves when working around a battery. Battery electrolyte fluid is an extremely corrosive sulfuric acid solution that can cause severe burns. If spill occurs flush area with clear water immediately.**

NOTE:

The battery shipped with the generator has been fully charged. A battery may lose some of its charge when not in use for prolonged periods of time. If the battery is unable to crank the engine, plug in the 12V charger included in the accessory box. **RUNNING THE GENERATOR DOES NOT CHARGE THE BATTERY.**

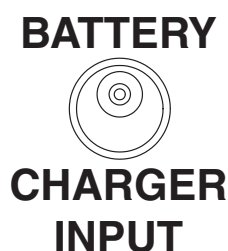
Use battery charger plug to keep the battery charged and ready for use. Battery charging should be done in a dry location.

1. Plug charger into "Battery Charger Input" jack, located on the control panel (Figure 13). Plug wall receptacle end of the battery charger into a 230 Volt AC wall outlet.
2. Unplug battery charger from wall outlet and control panel jack when generator is going to be in use.

NOTE:

Do not plug the 12v battery charger adapter into the generator receptacle to charge the the battery. Do not use the battery charger for more than 48 hours at one charge.

Figure 13 - Battery Charger Jack



3.1 PERFORMING SCHEDULED MAINTENANCE

It is important to perform service as specified in the Maintenance Schedule for proper generator operation, and to ensure that the generator complies with the applicable emission standards for the duration of its useful life. Service and repairs may be performed by any capable person or repair shop. Additionally, emissions critical maintenance must be performed as scheduled in order for the Emissions Warranty to be valid. Emissions critical maintenance consists of servicing the air filter and spark plugs in accordance with the Maintenance Schedule.

3.2 MAINTENANCE SCHEDULE

3.2.1 GP5000/GP6000E/GP6500E MAINTENANCE SCHEDULE

Follow the calendar intervals. More frequent service is required when operating in adverse conditions noted below.

Check Oil Level	At Each Use
Change Oil ‡	*Every 100 hours or Every Season
Check Valve Clearance	***Every Season
Service Air Filter	** Every 200 hours or Every Season
Replace Spark Plug	Every Season

‡ Change oil after first 30 hours of operation then every season.

* Change oil and oil filter every month when operating under heavy load or in high temperatures.

** Clean more often under dirty or dusty operating conditions. Replace air filter parts if they cannot be adequately cleaned.

*** Check valve clearance and adjust if necessary after first 50 hours of operation and every 100 hours thereafter.

3.2.2 GP2600/GP2800 MAINTENANCE SCHEDULE

Follow the calendar intervals. More frequent service is required when operating in adverse conditions noted below.

Check Oil Level	At Each Use
Change Oil ¥	*Every 50 Hours
Check Valve Clearance	***Every Season
Service Air Filter	**Every 25 Hours
Replace Spark Plug	****Every 100 Hours

¥ Change oil after first 20 hours of operation.

* Change oil every month when operating under heavy load or in high temperatures.

** Clean more often under dirty or dusty operating conditions. Replace air filter parts if they cannot be adequately cleaned.

*** Check valve clearance and adjust if necessary after first 50 hours of operation and every 100 hours thereafter.

**** Clean and re-gap spark plug every 50 hours.

3.3 PRODUCT SPECIFICATIONS

3.3.1 GP5000/GP6000E/GP6500E GENERATOR SPECIFICATIONS

Rated Power	5.0/6.0/6.5 kW*/**
Surge Power	7.5/9.0/9.0 kW
Rated AC Voltage	230
Rated AC Load	
Current @ 230V (5.0/6.0/6.5 kW)	21.7/26.0/28.2 Amps**
Rated Frequency	50 Hz @ 3000 RPM
Phase	Single Phase
Weight (GP5000/GP6000E/GP6500E)	82.5 kg (181.5 lbs)/ 88.9 kg (195.5 lbs)/88.9 kg (195.5 lbs)

* Operating temperature range: -18° C (0 °F) to 40 °C (104 °F) When operated above 25 °C (77 °F), there may be a decrease in engine power.

** Maximum wattage and current are subject to, and limited by, such factors as fuel Btu content, ambient temperature, altitude, engine condition, etc.. Maximum power decreases about 3.5% for each 1,000 feet above sea level.

3.3.2 GP2600/GP2800 GENERATOR SPECIFICATIONS

Rated. Power	2.6/ 2.8 kW*/**
Surge Power	3900W
Rated AC Voltage	230
Rated Current.....	11.3/ 12.1 Amps**
Rated Frequency	50 Hz @ 3000 RPM
Phase	Single Phase
Weight (GP2600/GP2800)	50 kg (110 lbs)

* Operating temperature range: -18 °C (0 °F) to 40 °C (104 °F) When operated above 25 °C (77 °F), there may be a decrease in engine power.

** Maximum wattage is subject to, and limited by, such factors as fuel Btu content, ambient temperature, altitude, engine condition, etc.. Maximum power decreases about 3.5% for each 1,000 feet above sea level.

3.3.3 GP5000/GP6000E/GP6500E ENGINE SPECIFICATIONS

Displacement.....	389 cc (5.0 kW)/420 cc (6.0/6.5 kW)
Spark Plug Type.....	NHSP F6RTC or equivalent
Spark Plug Part No.	OG84420101
Spark Plug Gap.....	0.70-0.80 mm
Gasoline Capacity (5.0/6.0/6.5 kW)	25.6L/28.4 L
Oil Type.....	See Chart in "Before Starting the Generator" Section
Oil Capacity	1 L
Run Time at 50% Load (5.0/6.0/6.5 kW).....	10.8/10.5/ 9.0 Hours

3.3.4 GP2600/GP2800 ENGINE SPECIFICATIONS

Displacement.....	208 cc
Spark Plug Type.....	TORCH F6RTC or equivalent
Spark Plug Gap.....	0.76 mm
Gasoline Capacity	12.7 L
Oil Type.....	See Chart in "Before Starting the Generator" Section
Oil Capacity	0.6 L
Run Time @ 50% load (2.6/ 2.8 kW).....	12.5/ 11.0 hours

3.4 GENERAL RECOMMENDATIONS

The warranty of the generator does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, the operator must maintain the generator as instructed in this manual.

Some adjustments will need to be made periodically to properly maintain the generator.

All adjustments in the Maintenance section of this manual should be made at least once each season. Follow the requirements in the "Maintenance Schedule".

NOTE:

Once a year replace the spark plug and replace the air filter. A new spark plug and clean air filter assure proper fuel-air mixture and help the engine run better and last longer.

3.4.1 GENERATOR MAINTENANCE

Generator maintenance consists of keeping the unit clean and dry. Operate and store the unit in a clean dry environment where it will not be exposed to excessive dust, dirt, moisture or any corrosive vapors. Cooling air slots in the generator must not become clogged with snow, leaves, or any other foreign material.

Check the cleanliness of the generator frequently and clean when dust, dirt, oil, moisture or other foreign substances are visible on its exterior surface.

⚠ CAUTION!

 **Never insert any object or tool through the air cooling slots, even if the engine is not running.**

NOTE:

DO NOT use a garden hose to clean generator. Water can enter the engine fuel system and cause problems. In addition, if water enters the generator through cooling air slots, some water will be retained in voids and crevices of the rotor and stator winding insulation. Water and dirt buildup on the generator internal windings will eventually decrease the insulation resistance of these windings.

3.4.2 TO CLEAN THE GENERATOR

- Use a damp cloth to wipe exterior surfaces clean.
- A soft, bristle brush may be used to loosen caked on dirt, oil, etc.
- A vacuum cleaner may be used to pick up loose dirt and debris.
- Low pressure air (not to exceed 25 psi) may be used to blow away dirt. Inspect cooling air slots and openings on the generator. These openings must be kept clean and unobstructed.

3.4.3 ENGINE MAINTENANCE

⚠ DANGER!

 **When working on the generator, always disconnect negative cable from battery. Also disconnect spark plug wire from spark plug and keep wire away from spark plug.**

3.4.4 CHECKING OIL LEVEL

See the "Before Starting the Generator" section for information on checking the oil level. The oil level should be checked before each use, or at least every eight hours of operation. Keep the oil level maintained.

3.4.5 CHANGING THE OIL

Change the oil after the first 20 to 30 hours of operation. Change the oil every 50 to 100 hours or every season thereafter. If running this unit under dirty or dusty conditions, or in extremely hot weather, change the oil more often.

⚠ CAUTION!

 **Hot oil may cause burns. Allow engine to cool before draining oil. Avoid prolonged or repeated skin exposure with used oil. Thoroughly wash exposed areas with soap.**

Use the following instructions to change the oil after the engine cools down:

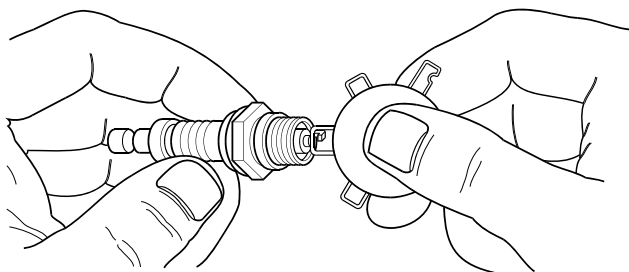
1. Clean area around oil drain plug.
2. Remove oil drain plug from engine and oil fill plug to drain oil completely into a suitable container.
3. When oil has completely drained, install oil drain plug and tighten securely.
4. Fill oil sump with recommended oil. (See "Before Starting the Generator" for oil recommendations).
5. Wipe up any spilled oil.
6. Dispose of used oil at a proper collection center.

3.4.6 REPLACING THE SPARK PLUG

See Engine Specifications for recommended spark plug. **Replace the plug once each year.** This will help the engine start easier and run better.

1. Stop the engine and pull the spark plug wire off of the spark plug.
2. Clean the area around the spark plug and remove it from the cylinder head.
3. Set the spark plug's gap to 0.70-0.80 mm. Install the correctly gapped spark plug into the cylinder head (Figure 14).

Figure 14 - Spark Plug Gap



3.4.7 BATTERY REPLACEMENT (IF APPLICABLE)

NOTE:

The battery shipped with the generator has been fully charged. A battery may lose some of its charge when not in use for prolonged periods of time. If the battery is unable to crank the engine, plug in the 12V charger included in the accessory box (see the Charging a Battery section). **RUNNING THE GENERATOR DOES NOT CHARGE THE BATTERY.** The part number for this battery is OG9449.

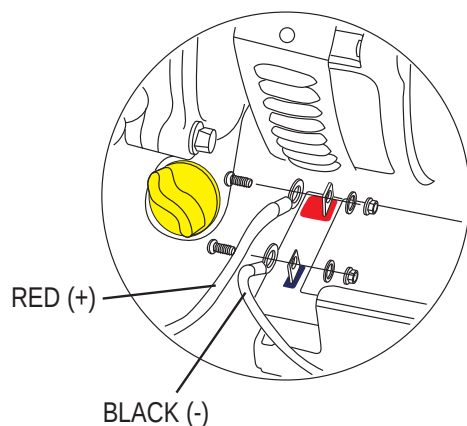
⚠ CAUTION!



The **NEGATIVE** battery terminal should:

1. Always be **DISCONNECTED FIRST.**
2. Always be **CONNECTED LAST.**

Figure 15 - Battery Connections



3.4.8 SPARK ARRESTOR

The engine exhaust muffler has a spark arrestor screen. Inspect and clean the screen at least once each year (Figures 16 and 17). If unit is used regularly, inspect and clean more often.

NOTICE:

If using the generator on any forest-covered, brush-covered or grass-covered unimproved land, it must be equipped with a spark arrestor. The spark arrestor must be maintained in good condition by the owner/operator.

Clean and inspect the spark arrestor as follows:

1. Remove clamp and spark arrestor from muffler.
2. Inspect screen and replace if torn, perforated or otherwise damaged. **DO NOT USE** a defective screen. If screen is not damaged, clean it with commercial solvent.
3. Replace the spark arrestor and clamp.

Figure 16 – Spark Arrestor GP5000/GP6000E/GP6500E

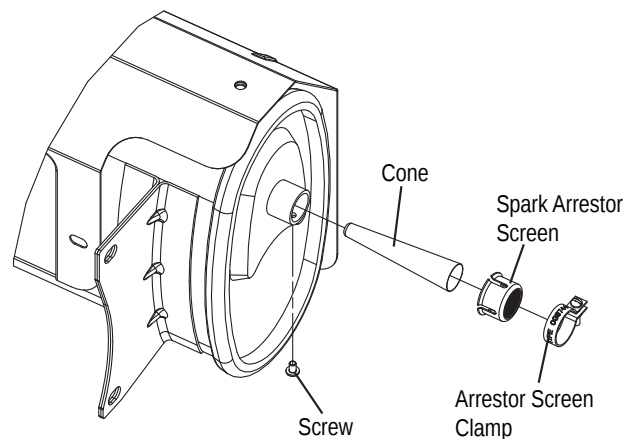
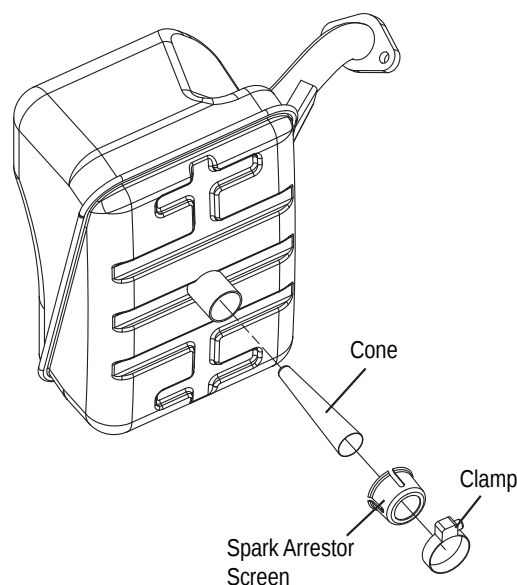


Figure 17 - Spark Arrestor GP2600/GP2800



3.5 SERVICE AIR CLEANER

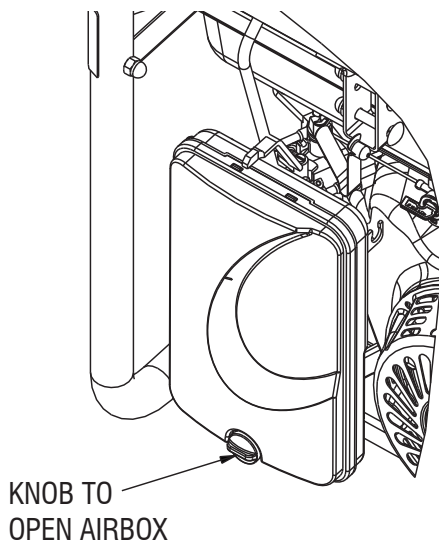
3.5.1 GP5000/GP6000E/GP6500E AIR CLEANER

The engine will not run properly and may be damaged if using a dirty air cleaner. Clean or replace the air filter once a year. Clean or replace more often if operating under dusty conditions (Figure 18). The air filter part number is OG84420151.

To clean or replace air filter:

1. Remove air cleaner cover and remove filter.
2. Wash in soapy water. Squeeze filter dry in clean cloth (DO NOT TWIST).
3. Clean air cleaner cover, then insert filter into the base of the air cleaner. Re-install air cleaner cover.

Figure 18 - Air Filter (GP5000/GP6000E/GP6500E)

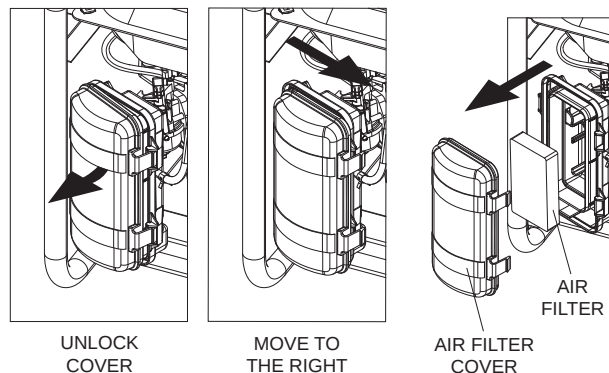


3.5.2 GP2600/GP2800 AIR CLEANER

The engine will not run properly and may be damaged if using a dirty air filter. Clean the air filter every 25 hours (Figure 19). Clean or replace more often if operating under dusty conditions.

1. Remove air filter cover.
2. Wash in soapy water. Squeeze filter dry in clean cloth (DO NOT TWIST).
3. Clean air filter cover before re-installing it.

Figure 19 - Air Filter



3.6 VALVE CLEARANCE

3.6.1 GP5000/GP6000E/GP6500E VALVE CLEARANCE

- Intake — 0.15 ± 0.02 mm (cold)
- Exhaust — 0.20 ± 0.02 mm (cold)

After the first 50 hours of operation, check the valve clearance in the engine and adjust if necessary.

Important: If feeling uncomfortable about doing this procedure or the proper tools are not available, please take the generator to the nearest service center to have the valve clearance adjusted. This is a very important step to ensure longest life for the engine.

3.6.2 GP2600/GP2800 VALVE CLEARANCE

- Intake — 0.10 ± 0.02 mm (cold)
- Exhaust — 0.15 ± 0.02 mm (cold)

After the first 50 hours of operation, check the valve clearance in the engine and adjust if necessary.

Important: If feeling uncomfortable about doing this procedure or the proper tools are not available, please take the generator to the nearest service center to have the valve clearance adjusted. This is a very important step to ensure longest life for the engine.

3.7 GENERAL

The generator should be started at least once every 30 days and be allowed to run at least 30 minutes. If this cannot be done and the unit must be stored for more than 30 days, use the following information as a guide to prepare it for storage.

⚠ DANGER!

⚠ NEVER store engine with fuel in tank indoors or in enclosed, poorly ventilated areas where fumes may reach an open flame, spark or pilot light as on a furnace, water heater, clothes dryer or other gas appliance.

⚠ Allow unit to cool entirely before storage.

3.8 LONG TERM STORAGE

It is important to prevent gum deposits from forming in essential fuel system parts such as the carburetor, fuel hose or tank during storage. Also, experience indicates that fuel can attract moisture, which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage.

To avoid engine problems, the fuel system should be emptied before storage of 30 days or longer, as follows:

1. Add a quality gasoline stabilizer to the fuel per the manufacturer's specifications, and run the unit for 10-15 minutes.
2. After engine cools down, remove all gasoline from the fuel tank. Use a commercially available, non-conductive vacuum siphon.

DANGER!

 **Drain fuel into approved container outdoors, away from open flame. Be sure engine is cool. Do not smoke.**

3. Start and run engine until engine stops from lack of fuel.
4. After engine cools down, drain oil from engine. Refill with recommended grade.
5. Remove spark plug and pour about 1/2 oz (15 ml) of engine oil into the cylinder. Cover spark plug hole with rag. Pull the recoil starter a couple times to lubricate the piston rings and cylinder bore. A fogging agent can also be used in the place of oil.

CAUTION!

 **Avoid spray from spark plug hole when cranking engine.**

6. Install and tighten spark plug. Do not connect spark plug wire.
7. Clean the generator outer surfaces. Check that cooling air slots and openings on generator are open and unobstructed.
8. Store the unit in a clean, dry place.

3.9 OTHER STORAGE TIPS

- Do not store gasoline from one season to another.
- Replace the gasoline can if it starts to rust. Rust and/or dirt in the gasoline will cause problems with the carburetor and fuel system.
- If possible, store the unit indoors and cover it to give protection from dust and dirt. **BE SURE TO EMPTY THE FUEL TANK.**
- If it is not practical to empty the fuel tank and the unit is to be stored for some time, use a commercially available fuel stabilizer added to the gasoline to increase the life of the gasoline. Run the unit for 10-15 minutes, turn off the fuel valve and allow to run until engine stops from lack of fuel.
- Cover the unit with a suitable protective cover that does not retain moisture.

DANGER!

 **NEVER cover the generator while engine and exhaust areas are warm.**

4.1 TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	CORRECTION
Engine is running, but no AC output is available.	1. Circuit breaker is open. 2. Poor connection or defective cord set. 3. Connected device is bad. 4. Fault in generator.	1. Reset circuit breaker. 2. Check and repair. 3. Connect another device that is in good condition. 4. Contact Authorized Service Facility.
Engine runs well but bogs down when loads are connected.	1. Short circuit in a connected load. 2. Generator is overloaded. 3. Engine speed is too slow. 4. Shorted generator circuit.	1. Disconnect shorted electrical load. 2. See "Don't Overload the Generator" . 3. Contact Authorized Service Facility. 4. Contact Authorized Service Facility.
Engine will not start; or starts and runs rough.	1. Fuel Shut-off is OFF. 2. Dirty air filter. 3. Out of gasoline. 4. Stale gasoline. 5. Spark plug wire not connected to spark plug. 6. Bad spark plug. 7. Water in gasoline. 8. Over-choking. 9. Low oil level. 10. Excessive rich fuel mixture. 11. Intake valve stuck open or closed. 12. Engine has lost compression.	1. Turn Fuel Shut-off to ON. 2. Clean or replace air filter. 3. Fill fuel tank. 4. Drain fuel tank and fill with fresh fuel. 5. Connect wire to spark plug. 6. Replace spark plug. 7. Drain fuel tank; fill with fresh fuel. 8. Put choke knob to No Choke position. 9. Fill crankcase to proper level. 10. Contact Authorized Service Facility. 11. Contact Authorized Service Facility. 12. Contact Authorized Service Facility.
Engine shuts down during operation.	1. Out of gasoline. 2. Low oil level. 3. Fault in engine.	1. Fill fuel tank. 2. Fill crankcase to proper level. 3. Contact Authorized Service Facility.
Engine lacks power.	1. Load is too high. 2. Dirty air filter. 3. Engine needs to be serviced.	1. Reduce load (see "Don't Overload the Generator"). 2. Clean or replace air filter. 3. Contact Authorized Service Facility.
Engine "hunts" or falters.	1. Choke is opened too soon. 2. Carburetor is running too rich or too lean.	1. Move choke to halfway position until engine runs smoothly. 2. Contact Authorized Service Facility.

This image shows a full page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook paper. There are no margins, text, or other markings on the page.

