

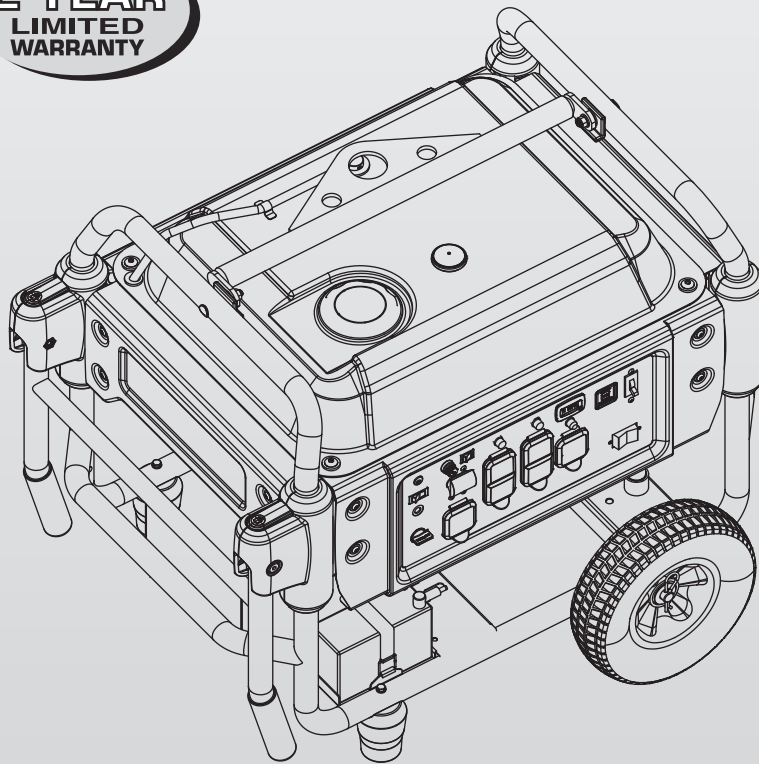
# GENERAC®

**MODELS: 005930-0,  
005931-0**

# Owner's Manual

## 6,500 & 8,000 Watt XP Series Portable Generator

**2 YEAR  
LIMITED  
WARRANTY**



**CSA®**  
C US

[www.generac.com](http://www.generac.com) or 1-888-436-3722

# Table of Contents

<b>Introduction.....</b>	<b>1</b>	<b>Maintenance .....</b>	<b>12</b>
<b>Read this Manual Thoroughly .....</b>	<b>1</b>	3.1 Maintenance Schedule .....	12
<b>Safety Rules .....</b>	<b>1</b>	3.2 Product Specifications.....	12
Standards Index .....	3	3.2.1 Generator Specifications .....	12
		3.2.2 Engine Specifications.....	12
		3.2.3 Emissions Information .....	12
<b>General Information.....</b>	<b>4</b>	3.3 General Recommendations.....	12
1.1 Unpacking.....	4	3.3.1 Generator Maintenance .....	13
1.1.1 Accessory Box .....	4	3.3.2 To Clean the Generator.....	13
1.2 Assembly.....	4	3.3.3 Engine Maintenance.....	13
1.2.1 Assembling the Wheel Kit .....	4	3.3.4 Checking Oil Level .....	13
1.2.2 Battery Connection .....	4	3.3.5 Changing the Oil and Oil Filter .....	13
		3.3.6 Replacing the Spark Plug .....	13
		3.3.7 Battery Service (Replacement).....	13
		3.3.8 Air Filter Replacement.....	14
		3.3.9 Clean Spark Arrestor Screen .....	14
		3.3.10 Adjusting Valve Clearance .....	15
<b>Operation .....</b>	<b>5</b>	3.4 General .....	15
2.1 Know the Generator .....	5	3.5 Long Term Storage.....	15
2.2 Hourmeter.....	6		
2.3 Cord Sets and Connection Plugs .....	6	<b>Troubleshooting .....</b>	<b>17</b>
2.3.1 120 VAC, 20 Amp, Duplex Receptacle .....	6	4.1 Troubleshooting Guide.....	17
2.3.2 120/240 VAC, 30 Amp, Receptacle.....	6		
2.3.3 Ground Fault Sensing Module .....	7	<b>Notes .....</b>	<b>18</b>
2.3.4 120 VAC, 30 Amp Receptacle.....	7		
2.4 Automatic Idle Control .....	7	<b>Warranty .....</b>	<b>20</b>
2.5 Voltage Selector Switch (XP6500E Only) .....	7		
2.6 How to Use the Generator .....	7		
2.6.1 System Ground.....	8		
2.6.2 Grounding the Generator .....	8		
2.6.3 Connecting Electrical Loads .....	8		
2.7 Overload Prevention .....	8		
2.8 Wattage Reference Guide .....	9		
2.9 Before Starting the Generator .....	9		
2.9.1 Adding Engine Oil .....	9		
2.9.2 Adding Gasoline.....	10		
2.10 Starting the Engine (Electric Start Only).....	10		
2.11 Starting Pull Start Engines.....	11		
2.12 Stopping the Engine .....	11		
2.13 Low Oil Level Shutdown System .....	11		
2.14 Charging the Battery.....	11		

## 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.

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.**

## GENERAL HAZARDS

- Never operate in an enclosed area or indoors.
- 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.

## Safety Rules

- Lifting Warning Hazard: A falling generator can result in death, bodily injury, and/or property damage. Stand clear of generator. Lift is designed to carry only the weight of the generator. DO NOT overload lifting bracket. Apply lifting strap or hook through lift bar hole(s) only. DO NOT lift while generator is running.
- 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.

### NOTE:

*This generator is equipped with a spark arrestor muffler. The spark arrestor must be maintained in effective working order by the owner/ operator. In the State of California, a spark arrestor is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands.*

## EXHAUST & LOCATION HAZARDS

- **Never operate in an enclosed area or indoors! NEVER use in the home, 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.**

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

- 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.**
- The National Electric Code (NEC) requires the frame and external electrically conductive parts of the generator be properly connected to an approved earth ground. Local electrical codes may also require proper grounding of the generator. Consult with a local electrician for grounding requirements in the area.
- Use a ground fault circuit interrupter in any damp or highly conductive area (such as metal decking or steel work).
- 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

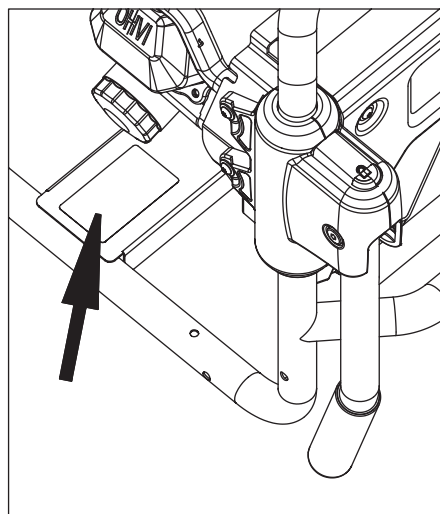
- **Gasoline is highly FLAMMABLE and its vapors are EXPLOSIVE. Do not permit smoking, open flames, sparks or heat in the vicinity while handling gasoline.**
- Never add fuel while unit is running or hot. Allow engine to cool completely before adding fuel.
- **Never fill fuel tank indoors.** Comply with 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.

MODEL NO:	
SERIAL NO:	

**Unit ID Location**



## STANDARDS INDEX

In the absence of pertinent standards, codes, regulations and laws, the published information listed below may be used as a guideline for operation of this equipment. Always reference the latest revision available for the standards listed.

1. NFPA No. 70, NFPA HANDBOOK OF NATIONAL ELECTRIC CODE.
2. Article X, NATIONAL BUILDING CODE, available from the American Insurance Association, 85 John Street, New York, N.Y. 10038.
3. AGRICULTURAL WIRING HANDBOOK, available from the Food and Energy Council, 909 University Avenue, Columbia, MO 65201.
4. ASAE EP-3634, INSTALLATION AND MAINTENANCE OF FARM STANDBY ELECTRICAL SYSTEMS, available from the American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085.

### CALIFORNIA PROPOSITION 65 WARNING

Engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

### CALIFORNIA PROPOSITION 65 WARNING

This product contains or emits chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

# General Information

## 1.1 UNPACKING

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

### 1.1.1 ACCESSORY BOX

Check all contents (Figure 1). If any parts are missing or damaged locate an authorized dealer at 1-888-436-3722.

Contents include:

- 2 – Wheels
- 2 – Hair Pins
- Spark Plug
- Air Filter
- Oil Filter
- 2 – Bolts
- 2 – 5/8" Flat Washers (thin)
- 2 – 1 Quart SAE 30 Oil Bottles
- Oil Funnel
- 2 – Frame Feet
- 12 Volt Adaptor Plug Charger
- Spark Plug Wrench
- Shop Towel
- 2 – Flat Washers (small)
- 2 – 5/8" Flat Washers (thick)

## 1.2 ASSEMBLY

Read entire Owner's Manual before attempting to assemble or operate the generator. The generator requires some assembly prior to using it. If problems arise when assembling the generator, please call the Generator Helpline at 1-888-436-3722.

### 1.2.1 ASSEMBLING THE WHEEL KIT

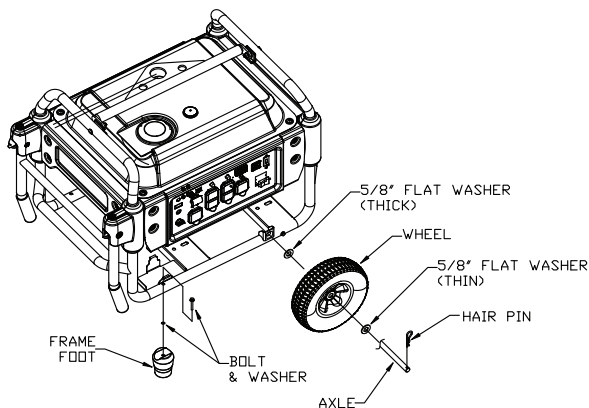
The wheel kit is designed to greatly improve the portability of the generator. A 10mm wrench is needed to install the Frame Feet.

#### NOTE:

The wheel kit is not intended for over-the-road use.

- Refer to Figure 1 and install the wheels and feet as follows:
- Align the hole in the frame foot to the hole in the frame. Secure foot with a bolt and flat washer (small). Repeat for other foot.
- Slide the axle through the holes on the axle brackets.
- Slide on one 5/8" flat washer (thick), wheel and a 5/8" flat washer (thin) onto the axle.
- Secure with hair pin and repeat for the other wheel.

Figure 1 – Wheel Assembly



## 1.2.2 BATTERY CONNECTION

#### NOTE:

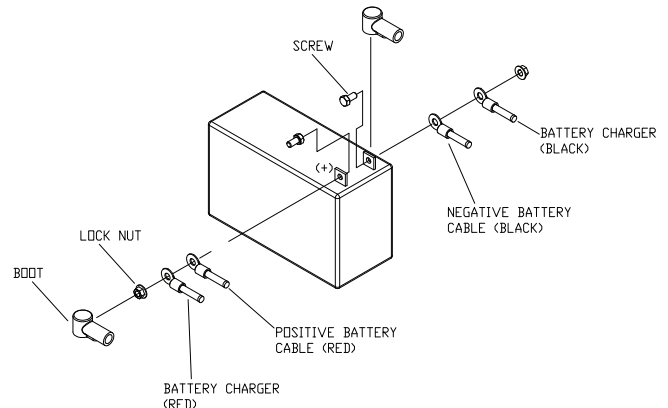
The battery shipped with the generator has been fully charged. A battery may lose some of its charge when not in use for prolonged periods of time. If the battery is unable to crank the engine, plug in the 12V charger included in the accessory box (see the Charging a Battery section). **RUNNING THE GENERATOR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

The unit has been deliberately shipped with the battery cables disconnected.

See Figure 2 for connection details.

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

Figure 2 - Battery Connections



## 2.1 KNOW THE GENERATOR

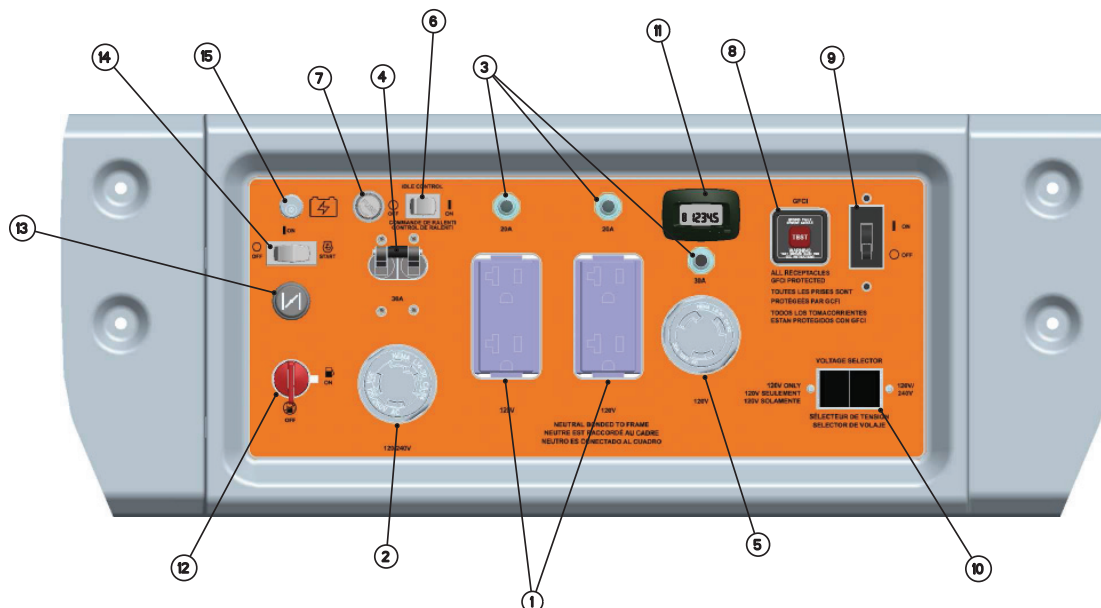
Read the Owner's Manual and Safety Rules before operating this generator.

Compare the generator to Figures 3 and 4 to become familiarized with the locations of various controls and adjustments. Save this manual for future reference.

1. **120 Volt AC, 20 Amp, Duplex Receptacle** – Supplies electrical power for the operation of 120 Volt AC, 20 Amp, single-phase, 60 Hz electrical lighting, appliance, tool and motor loads.
2. **120/240 Volt AC, 30 Amp Locking Receptacle** – Supplies electrical power for the operation of 120 and/or 240 Volt AC, 30 Amp, single-phase, 60 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. **2-Pole Circuit Breaker** – this 30 Amp 2-pole circuit breaker protects the 120/240 Volt locking receptacle.
5. **120 Volt AC, 30 Amp Locking Receptacle** – Supplies electrical power for the operation of 120 Volt AC, 30 Amp, single-phase, 60Hz electrical lighting, appliance, tool and motor loads.
6. **Idle Control** – with the switch in the “ON” position, the idle control runs the engine at normal (high) speeds when there is an electrical load present and runs the engine at idle (low) speeds when a load is not present.
7. **Fuse** – this 1.5 Amp fuse protects the Battery Charger Input jack.
8. **Ground Fault Sensing Module** – supplies ground fault to protect electrical power for all receptacles on the control panel.
9. **GFCI Circuit Breaker** – Use to reset the full control panel GFCI electrical system.

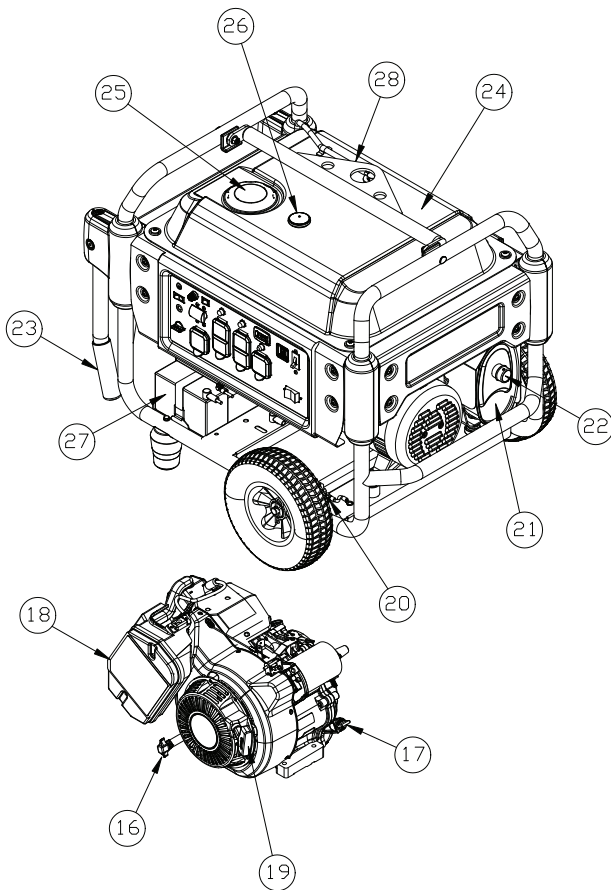
10. **Voltage Selector Switch** – Allows the user to choose between 120/240 volts, or 120 volts only. When in the 120 volt only position, the total generator output is available through any of the 120 volt outlets. In the 120/240V position, receptacles of 120 and 240 volts AC can be used simultaneously. The voltage selector switch provides the user with more usable power and improved flexibility.
11. **Hourmeter** – Tracks hours of operation.
12. **Fuel Shut Off** – Valve between fuel tank and carburetor.
13. **Choke Knob** – Used when starting a cold engine.
14. **Start Switch** – Used to start engine from the starter motor.
15. **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.
16. **Oil Drain** – Use to drain engine oil.
17. **Oil Fill** – Add oil here.
18. **Air Filter** – Filters intake air as it is drawn into the engine.
19. **Recoil Starter** – Use to start engine manually.
20. **Grounding Lug** – Ground the generator to an approved earth ground here. See "Grounding the Generator" for details.
21. **Muffler** – Quiets the engine.
22. **Spark Arrestor** – Reduces fire hazards by containing sparks.
23. **Handles** – Pivot and retract for storage. Press the spring-loaded button to move handles.
24. **Fuel Tank** – See generator Specifications for tank capacity.
25. **Gas Cap** – Fuel fill location.
26. **Fuel Gauge** – Shows fuel level in tank.
27. **Battery** – Powers the electric starter.
28. **Lifting Device** – use to lift and store the generator after use. See Lifting Safety notes in the beginning of this manual.

Figure 3 - Control Panel



# Operation

Figure 4 - Generator Controls



## 2.2 HOURMETER

The Hourmeter tracks hours of operation for scheduled maintenance:

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 — Air Filter Interval (Every 200 hrs)

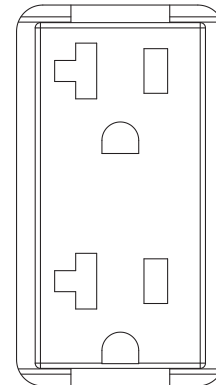
## 2.3 CORD SETS AND CONNECTION PLUGS

### 2.3.1 120 VAC, 20 AMP, DUPLEX RECEPTACLE

This is a 120 Volt outlet protected against overload by a 20 Amp push-to-reset circuit breaker (Figure 5). Use each socket to power 120 Volt AC, single phase, 60 Hz electrical loads requiring up to a combined 2400 watts (2.4 kW) or 20 Amps of current. Use only high quality, well-insulated, 3-wire grounded cord sets rated for 125 Volts at 20 Amps (or greater).

Keep extension cords as short as possible, preferably less than 15 feet long, to prevent voltage drop and possible overheating of wires.

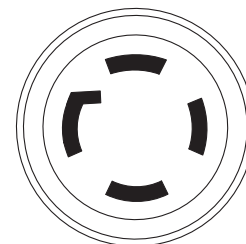
Figure 5 - 120 Volt AC, 20 Amp, Duplex Receptacle



### 2.3.2 120/240 VAC, 30 AMP RECEPTACLE

Use a NEMA L14-30 plug with this receptacle (rotate to lock/unlock). Connect a suitable 4-wire grounded cord set to the plug and to the desired load. The cord set should be rated for 250 Volts AC at 30 Amps (or greater) (Figure 6).

Figure 6 - 120/240 VAC, 30 Amp Receptacle



120V/240V  
30A

Use this receptacle to operate 120 Volt AC, 60 Hz, single phase loads requiring up to 3600 watts (3.6 kW) of power at 30 Amps or 240 Volt AC, 60 Hz, single phase loads requiring up to 7200 watts (7.2 kW) of power at 30 Amps. The outlet is protected by a 2-pole circuit breaker.

### 2.3.3 GROUND FAULT SENSING MODULE

This unit is equipped with a ground fault circuit interrupter (GFCI). This device meets applicable federal, state and local codes. The ground fault sensing module covers all receptacles.

In the event of a ground fault, the GFCI will trip and quickly stop the flow of electricity to prevent serious injury.

**Definition:** The GFCI constantly monitors electricity flowing in a circuit. If the current flowing through the circuit varies from what is returning by even a small amount, the GFCI instantly switches power off by tripping the main circuit breaker on the generator's control panel.

A GFCI does NOT protect against circuit overloads, short circuits, or shocks. For example, electric shock can still occur if a person touches charged electrical wires while standing on a non-conducting surface, such as a wood floor.

Test the GFCI outlet before each use as follows (Figure 7):

- Start the generator.
- Plug a test lamp into duplex receptacle, the lamp should be on.
- Press the "Test" button on the GFCI to trip the device. The main breaker should 'trip', this being indicated by the movement of the actuator handle to the 'OFF' position.
- This should stop the flow of electricity making the lamp shut off. If the main breaker does not 'trip', the GFCI is not working and the generator should not be used. Contact a local service dealer.
- To restore the flow of electricity, set the main breaker actuator handle to the 'ON' position. The handles should remain latched in this position. If it does not, either the GFCI or the main breaker is failing and should be replaced. Contact a local service dealer.
- This GFCI is protected against overload by a 35A/240V main breaker.

**Figure 7 - Testing the GFCI**

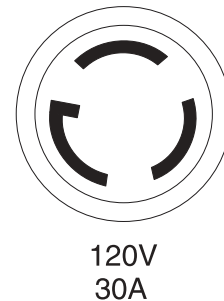


### 2.3.4 120 VAC, 30 AMP RECEPTACLE

Use a NEMA L5-30 plug with this receptacle (rotate to lock/unlock). Connect a suitable 3-wire cord set to the plug and to the desired load. The cord set should be rated for 250 Volts AC at 30 Amps (or greater) (Figure 8).

Use this receptacle to operate 120 Volt AC, 60Hz, single phase loads requiring up to 7200 watts (7.2kW) of power at 30 Amps. The outlet is protected by a 30 Amp push-to-reset circuit breaker.

**Figure 8 - 120 VAC, 30 Amp Receptacle**



### 2.4 AUTOMATIC IDLE CONTROL

This feature is designed to greatly improve fuel economy. When this switch is turned "On," the engine will only run at its normal fast governed engine speed when electrical load is connected. When the load is removed, the engine will run at a reduced speed. With the switch "Off," the engine runs at the normal fast engine speed all the time. **Always have the switch OFF when starting and stopping the engine (Figure 12).**

### 2.5 VOLTAGE SELECTOR SWITCH (XP6500E ONLY)

The voltage selector switch, when in the "120/240V" position, divides the available power into 120V and 240V available through all appropriate receptacles. When in the "120V only" position, all power is provided at 120V and equally balances the alternator.

### 2.6 HOW TO USE THE GENERATOR

If there are any problems operating the generator, please call the generator helpline at 1-888-436-3722.

#### **⚠ DANGER!**

**⚠ Never operate in an enclosed area or indoors! NEVER use in the home, 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.**



## Operation

**!** 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.

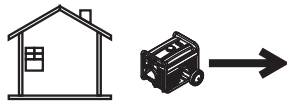
### **⚠ DANGER**

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.



Only use **OUTSIDE** and far away from windows, doors, and vents.

### 2.6.1 SYSTEM GROUND

The generator has a system ground that connects the generator frame components to the ground terminals on the AC output receptacles. The system ground is bonded to the AC neutral wire in the generator control panel via a jumper wire.

#### Special Requirements

There may be Federal or State Occupational Safety and Health Administration (OSHA) 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.

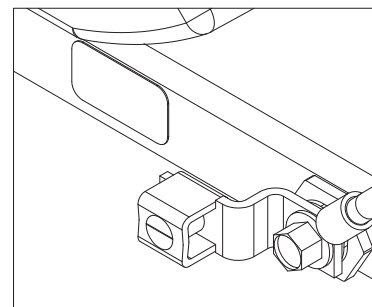
#### Connecting to a Building's Electrical System

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 related laws and codes.

### 2.6.2 GROUNDING THE GENERATOR

The National Electrical Code requires that the frame and external electrically conductive parts of this generator be properly connected to an approved earth ground (Figure 9). Local electrical codes may also require proper grounding of the unit. For that purpose, connecting a No. 10 AWG (American Wire Gauge) 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 9 - 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.

### 2.6.3 CONNECTING ELECTRICAL LOADS

**DO NOT** connect 240 Volt loads to 120 Volt receptacles. **DO NOT** connect 3-phase loads to the generator. **DO NOT** connect 50 Hz loads to the generator.

- Let engine stabilize and warm up for a few minutes after starting.
- Plug in and turn on the desired 120 or 240 Volt AC, single phase, 60 Hz electrical loads.
- Add up the rated watts (or amps) of all loads to be connected at one time. This total should not be greater than (a) the rated wattage/ampere capacity of the generator or (b) circuit breaker rating of the receptacle supplying the power. See "Don't Overload the Generator".

## 2.7 OVERLOAD PREVENTION

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.

The Wattage Reference Guide is provided to assist in determining how many items the generator can operate at one time.

**NOTE:**

All figures are approximate. See data label on appliance for wattage requirements.

## 2.8 WATTAGE REFERENCE GUIDE

Device	Running Watts
*Air Conditioner (12,000 Btu)	1700
*Air Conditioner (24,000 Btu)	3800
*Air Conditioner (40,000 Btu)	6000
Battery Charger (20 Amp)	500
Belt Sander (3")	1000
Chain Saw	1200
Circular Saw (6-1/2")	.800 to 1000
*Clothes Dryer (Electric)	5750
*Clothes Dryer (Gas)	700
*Clothes Washer	1150
Coffee Maker	1750
*Compressor (1 HP)	2000
*Compressor (3/4 HP)	1800
*Compressor (1/2 HP)	1400
Curling Iron	700
*Dehumidifier	650
Disc Sander (9")	1200
Edge Trimmer	500
Electric Blanket	400
Electric Nail Gun	1200
Electric Range (per element)	1500
Electric Skillet	1250
*Freezer	700
*Furnace Fan (3/5 HP)	875
*Garage Door Opener	.500 to 750
Hair Dryer	1200
Hand Drill	.250 to 1100
Hedge Trimmer	450
Impact Wrench	500
Iron	1200
*Jet Pump	800
Lawn Mower	1200
Light Bulb	100
Microwave Oven	.700 to 1000
*Milk Cooler	1100
Oil Burner on Furnace	300
Oil Fired Space Heater (140,000 Btu)	400
Oil Fired Space Heater (85,000 Btu)	225
Oil Fired Space Heater (30,000 Btu)	150

*Paint Sprayer, Airless (1/3 HP)	600
Paint Sprayer, Airless (handheld)	150
Radio	.50 to 200
*Refrigerator	700
Slow Cooker	200
*Submersible Pump (1-1/2 HP)	2800
*Submersible Pump (1 HP)	2000
*Submersible Pump (1/2 HP)	1500
*Sump Pump	.800 to 1050
*Table Saw (10")	1750 to 2000
Television	.200 to 500
Toaster	1000 to 1650
Weed Trimmer	500

\* Allow 3 times the listed watts for starting these devices.

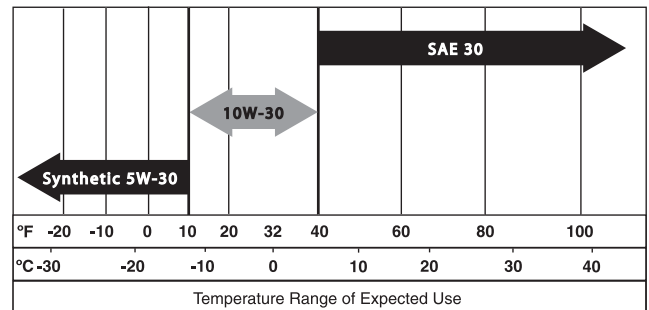
## 2.9 BEFORE STARTING THE GENERATOR

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

### 2.9.1 ADDING ENGINE OIL

All oil should meet minimum American Petroleum Institute (API) Service Class SJ, SL or better. Use no special additives. Select the oil's viscosity grade according to the expected operating temperature (also see chart).

- Above 40° F, use SAE 30
- Below 40° F and down to 10° F, use 10W-30
- Below 10° F, use synthetic 5W-30



### ⚠ 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.

- Place generator on a level surface.
- Clean area around oil fill and remove oil fill cap.
- Slowly fill engine with oil through the oil fill opening until it reaches the full mark. Stop filling occasionally to check oil level. The engine is full when the oil level reaches the bottom threads of the mating oil fill cap.
- Install the oil fill cap and finger tighten securely.
- Check engine oil level before starting each time thereafter.

# Operation

## 2.9.2 ADDING GASOLINE

Use care when fueling the generator. Only fill the fuel tank when the generator has cooled entirely. Use fresh unleaded gasoline with a minimum Research Octane Number (RON) of 87.

### NOTE:

Do not use any gasoline containing more than 10% Ethanol. NEVER fill the fuel tank with E85 or a mixture of oil and gasoline designated for two-cycle engines.

### ⚠ DANGER!

⚠ Do not light a cigarette or smoke when filling the fuel tank.

⚠ Gasoline is highly FLAMMABLE and its vapors are EXPLOSIVE. Do not permit smoking, open flames, sparks or heat in the vicinity while handling gasoline.

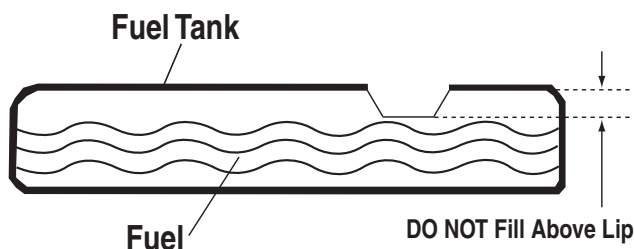
⚠ Never fill fuel tank indoors. Never fill fuel tank when engine is running or hot. Avoid spilling gasoline on a hot engine. Allow engine to cool entirely before filling fuel tank.

⚠ Do not overfill the fuel tank. Always allow room for fuel expansion. If the fuel tank is overfilled, fuel can overflow onto a hot engine and cause a fire or an explosion. Wipe up any fuel spills immediately.

- Use regular UNLEADED gasoline with the generator engine. Do not use premium gasoline. Do not mix oil with gasoline.
- Clean area around fuel fill cap, remove cap.
- Slowly add unleaded regular gasoline to fuel tank. Do not fill above inner lip. **Be careful not to overfill** (Figure 10).
- 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. Alcohol-blended fuels (called gasohol, ethanol or methanol) 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 10 - Fuel Tank



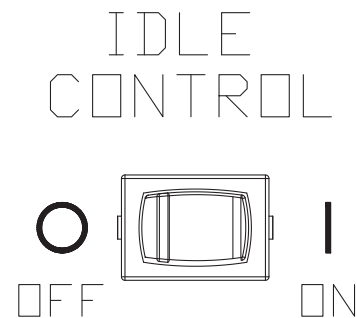
## 2.10 STARTING THE ENGINE (ELECTRIC START ONLY)

### ⚠ WARNING!

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

- Unplug all electrical loads from the unit's receptacles before starting the engine.
- Make sure the unit is in a level position.
- Open the fuel shut-off valve (Figure 12).
- Locate the Idle Control ON/OFF switch on the control panel and set it to the "OFF" position (Figure 11).

Figure 11 - Idle Control Switch



- Pull the CHOKE knob outward to "Full Choke" position (Figure 12).
- To start engine, press and hold the Start/Run/Stop switch in the "Start" position. The engine will crank and attempt to start. When the engine starts, release the switch to the run position.
- When the engine starts, push choke knob in to "1/2 Choke" position until the engine runs smoothly and then fully in to the "Run" position. If engine falters, pull the choke knob back out to "1/2 Choke" position until the engine runs smoothly and then to "Run" position.
- This generator is also equipped with a manual recoil starter which may be used if the battery is discharged.

**IMPORTANT:** Do not overload the generator. Also, do not overload individual panel receptacles. These outlets are protected against overload with push-to-reset and 2-pole 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.

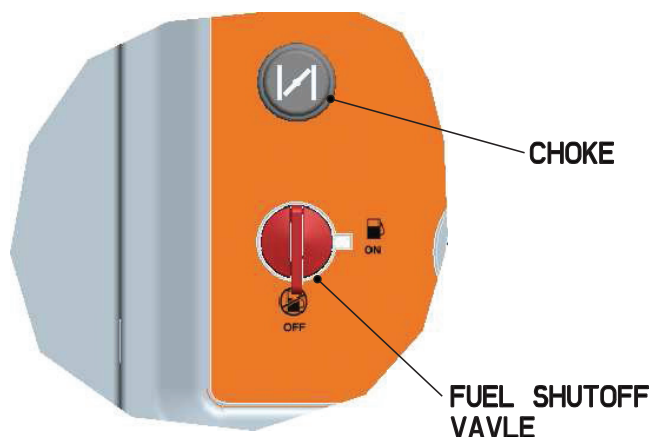
## 2.11 STARTING PULL START ENGINES

### **⚠ WARNING!**

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

- Unplug all electrical loads from the unit's receptacles before starting the engine.
- Make sure the unit is in a level position.
- OPEN the Fuel Shut-off Valve (Figure 12).
- Turn the OFF/ON/START switch to the "ON" position.
- Pull the choke knob outward (Figure 12).

**Figure 12 - Fuel Shut-off Valve**



- To start engine, firmly grasp the recoil handle and pull slowly until increased resistance is felt. Pull rapidly up and away.
- When engine starts, push the choke knob in 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 and 2-pole 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.

## 2.12 STOPPING THE ENGINE

- 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.
- Let engine run at no-load for several minutes to stabilize the internal temperatures of engine and generator.
- Move START/RUN/STOP switch to "STOP" position.
- Close fuel valve.

## 2.13 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.

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.

## 2.14 CHARGING THE BATTERY

### **⚠ 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 (see section "Charging the Battery"). RUNNING THE GENERATOR WILL CHARGE THE BATTERY.**

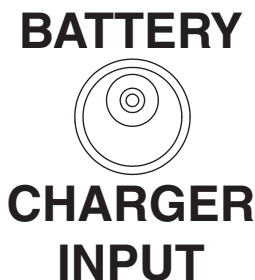
Use battery charger plug to keep the battery charged and ready for use. Battery charging should be done in a dry location.

1. Plug charger into "Battery Charger Input" jack, located on the control panel. Plug wall receptacle end of the battery charger into a 120 Volt AC wall outlet (Figure 13).
2. Unplug battery charger from wall outlet and control panel jack when generator is going to be in use.

**NOTE:**

Do not use the battery charger for more than 48 hours at one charge. If the battery is completely discharged, start the unit per the "Starting Pull Start Engines" section and recharge the battery by running the unit.

*Figure 13 - Battery Charger Jack*



## 3.1 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 and Oil Filter ‡	*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
Clean Spark Arrestor Screen	Every 100 hours or 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 PRODUCT SPECIFICATIONS

### 3.2.1 GENERATOR SPECIFICATIONS

Rated Power .....	6.5/8.0 kW**
Surge Power .....	8.13kW/10kW**
Rated AC Voltage .....	120/240
Rated Max AC Load	
Current @ 240V .....	27.1 Amps/33.3 Amps**
Current @ 120V .....	54.2 Amps/66.7 Amps**
Rated Frequency .....	60 Hz @ 3600 RPM
Phase .....	Single Phase

\*\* 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; and will also decrease about 1% for each 6° C (10° F) above 16° C (60° F) ambient temperature.

### 3.2.2 ENGINE SPECIFICATIONS

Displacement .....	410cc
Spark Plug Type .....	Champion RC14YC or equivalent
Spark Plug Gap .....	0.030 inch or (0.76 mm)
Gasoline Capacity .....	9 U.S. gallons
Oil Type .....	See Chart in "Adding Engine Oil" Section
Oil Capacity (with filter) .....	1.5 Qts.
(without filter) .....	1.2 Qts.
Run Time (50% Load) .....	11.25 Hours
Class II Emission Certified	

### 3.2.3 EMISSIONS INFORMATION

The Environmental Protection Agency (EPA) requires that this generator comply with exhaust emission standards. This generator is certified to meet the applicable EPA emission levels on gasoline. The emission control system on this generator consists of the following:

- Air Induction system
  - ~ Intake Pipe/Manifold
  - ~ Air Cleaner
- Exhaust System
  - ~ Exhaust manifold
  - ~ Muffler
- Ignition System
  - ~ Spark Plug
  - ~ Ignition Coil
- Fuel System
  - ~ Carburetor
  - ~ Fuel Lines
  - ~ Fuel Tank/Cap
  - ~ Evaporative Vent Lines

It is important to perform the service specified in the maintenance Schedule to ensure that the generator complies with the applicable emission standards for the duration of its useful life. 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. Service and repairs may be performed by any capable person or repair shop.

## 3.3 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.**

## 3.3.1 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.

## 3.3.2 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.

## 3.3.3 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.

## 3.3.4 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.

## 3.3.5 CHANGING THE OIL AND OIL FILTER

Change the oil and oil filter after the first 30 hours of operation. Change the oil every 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:

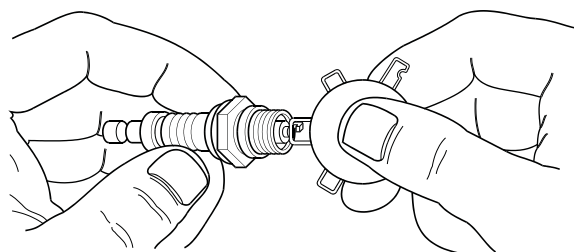
- Clean area around oil drain plug.
- Remove oil drain plug from engine and oil fill plug to drain oil completely into a suitable container.
- When oil has completely drained, install oil drain plug and tighten securely.
- Place a suitable container beneath the oil filter and turn filter counterclockwise to remove. Discard according to local regulations.
- Coat gasket of new filter with clean engine oil. Turn filter clockwise until gasket contacts lightly with filter adapter. Then tighten an additional 3/4 turn.
- Fill oil sump with recommended oil. (See "Before Starting the Generator" for oil recommendations).
- Wipe up any spilled oil.
- Dispose of used oil at a proper collection center.

## 3.3.6 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 (0.028-0.031 in.). Install the correctly gapped spark plug into the cylinder head (Figure 14).

Figure 14 - Spark Plug Gap



## 3.3.7 BATTERY SERVICE (REPLACEMENT)

The battery shipped with the generator has been provided fully charged. Caution must be taken when connecting the battery.

#### NOTE:

**A battery may lose some of its charge when not in use for prolonged periods of time. The battery may have to be recharged before the first use. (See the "Know the Generator" section.)**



# Maintenance

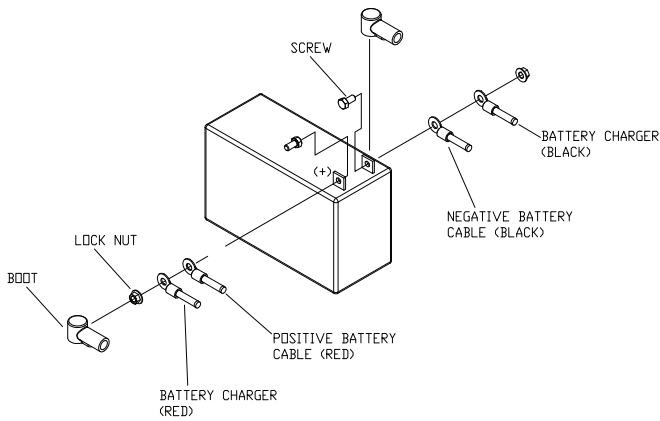
To replace the battery:

- Slide the boots off of the battery terminals.
- Disconnect the BLACK battery cable and the black battery charger wire from the battery Negative terminal (-).
- Disconnect the RED battery cable and the red battery charger wire from the battery Positive terminal (+).
- Remove the battery strap.

To install a new battery:

- Reverse the steps above and follow Figure 15.
- Double check all connections to ensure they are in the correct location and secure. See Figure 15.
- Secure battery with battery strap.

**Figure 15 - Battery Connections**



Battery Type: CP12-10, 12V, 10AH

### 3.3.8 AIR FILTER REPLACEMENT

The engine will not run properly and may be damaged if using a dirty air cleaner. Clean or replace the air cleaner paper filter once a year. Clean or replace more often if operating under dusty conditions (Figure 16).

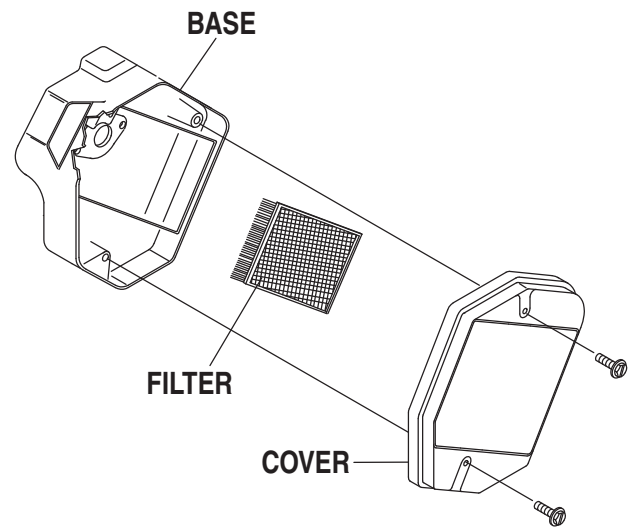
**To clean or replace paper air filter:**

- Remove air cleaner cover and remove paper filter.
- Clean paper filter by tapping it gently on a solid surface. If the filter is too dirty, replace it with a new one. Dispose of the old filter properly.
- Clean air cleaner cover, then insert new paper filter into the base of the air cleaner. Re-install air cleaner cover.

**NOTE:**

**To order a new air filter, please contact the nearest authorized service center at 1-800-333-1322.**

**Figure 16 - Air Filter**



### 3.3.9 CLEAN SPARK ARRESTOR SCREEN

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

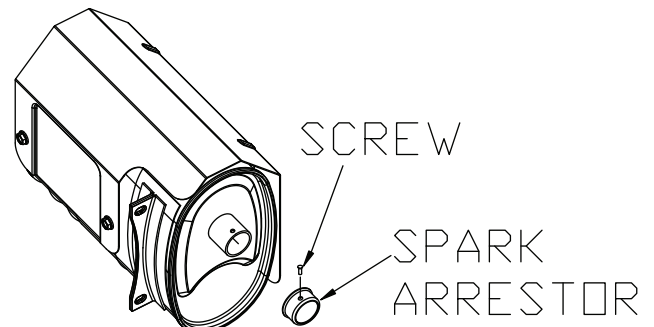
**NOTE:**

**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 when the engine is at ambient temperature as follows:**

- Remove spark arrestor from muffler by removing the screw.
- 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.
- Replace the spark arrestor and secure with the screw.

**Figure 17 - Spark Arrestor**





## 3.3.10 ADJUSTING VALVE CLEARANCE

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 insure longest life for the engine.

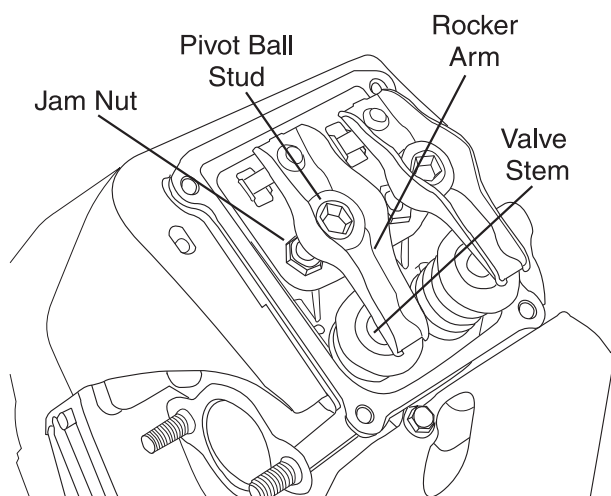
### To check valve clearance:

- Make sure the engine is at room temperature (60° - 80° F).
- Make sure that the spark plug wire is removed from the spark plug and out of the way. Remove spark plug.
- Remove the four screws attaching the valve cover.
- Make sure the piston is at Top Dead Center (TDC) of its compression stroke (both valves closed). To get the piston at TDC, remove the intake screen at the front of the engine to gain access to the flywheel nut. Use a large socket and socket wrench to rotate the nut and hence the engine in a clockwise direction while watching the piston through the spark plug hole. The piston should move up and down. The piston is at TDC when it is up as high as it can go.
- Insert a 0.002 - 0.004 inch (0.05 - 0.1mm) feeler gauge between the rocker arm and valve stem. Correct clearance is when a slight drag is felt when sliding the gauge back and forth. If the clearance is either excessively loose or tight the rocker arms will need adjusting.

### To adjust valve clearance:

- Loosen the rocker jam nut (Figure 18). Use an 10mm allen wrench to turn the pivot ball stud while checking clearance between the rocker arm and the valve stem with a feeler gauge. Correct clearance is 0.002-0.004 inch (0.05-0.1 mm).

**Figure 18 - Valve Clearance Adjustment**



### NOTE:

The rocker arm jam nut must be held in place as the pivot ball stud is turned.

When valve clearance is correct, hold the pivot ball stud in place with the allen wrench and tighten the rocker arm jam nut. Tighten the jam nut to 174 in/lbs. torque. After tightening the jam nut, recheck valve clearance to make sure it did not change.

- Install new valve cover gasket.
- Re-attach the valve cover.

### NOTE:

**Start all four screws before tightening or it will not be possible to get all the screws in place. Make sure the valve cover gasket is in place. Replace spark plug.**

- Re-attach the spark plug wire to the spark plug.

## 3.4 GENERAL

The generator should be started at least once every seven 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.**

## 3.5 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 alcohol-blended fuels (called gasohol, ethanol or methanol) 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.

- 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.

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

- Remove all gasoline from the fuel tank.

### **⚠ DANGER!**

**⚠ Drain fuel into approved container outdoors, away from open flame. Be sure engine is cool. Do not smoke in the vicinity or light a cigarette.**

## Maintenance

- Start and run engine until engine stops from lack of fuel.
- After the engine cools down, drain oil from crankcase. Refill with recommended grade.
- Remove spark plug and pour about 1/2 ounce (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.

### **⚠ CAUTION!**

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

- Install and tighten spark plug. Do not connect spark plug wire.
- Clean the generator outer surfaces. Check that cooling air slots and openings on generator are open and unobstructed.
- Store the unit in a clean, dry place.
- Do not store gasoline from one season to another.
- Cover the unit with a suitable protective cover that does not retain moisture.

### **⚠ DANGER!**

**⚠ NEVER cover the generator while engine and exhaust area are warm. Allow unit to cool entirely.**

## 4.1 TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	CORRECTION
Engine is running, but no AC output is available.	<ol style="list-style-type: none"> <li>1. Circuit breaker is open.</li> <li>2. Poor connection or defective cord set.</li> <li>3. Connected device is bad.</li> <li>4. Fault in generator.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reset circuit breaker.</li> <li>2. Check and repair.</li> <li>3. Connect another device that is in good condition.</li> <li>4. Contact Authorized Service Facility.</li> </ol>
Engine runs good but bogs down when loads are connected.	<ol style="list-style-type: none"> <li>1. Short circuit in a connected load.</li> <li>2. Generator is overloaded.</li> <li>3. Engine speed is too slow.</li> <li>4. Shorted generator circuit.</li> </ol>	<ol style="list-style-type: none"> <li>1. Disconnect shorted electrical load.</li> <li>2. See "Don't Overload the Generator" .</li> <li>3. Contact Authorized Service Facility.</li> <li>4. Contact Authorized Service Facility.</li> </ol>
Engine will not start; or starts and runs rough.	<ol style="list-style-type: none"> <li>1. Fuel Shut-off is OFF.</li> <li>2. Dirty air filter.</li> <li>3. Out of gasoline.</li> <li>4. Stale gasoline.</li> <li>5. Spark plug wire not connected to spark plug.</li> <li>6. Bad spark plug.</li> <li>7. Water in gasoline.</li> <li>8. Over-choking.</li> <li>9. Low oil level.</li> <li>10. Excessive rich fuel mixture.</li> <li>11. Intake valve stuck open or closed.</li> <li>12. Engine has lost compression.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn Fuel Shut-off to ON.</li> <li>2. Clean or replace air filter.</li> <li>3. Fill fuel tank.</li> <li>4. Drain fuel tank and fill with fresh fuel.</li> <li>5. Connect wire to spark plug.</li> <li>6. Replace spark plug.</li> <li>7. Drain fuel tank; fill with fresh fuel.</li> <li>8. Put choke knob to <b>No Choke</b> position.</li> <li>9. Fill crankcase to proper level.</li> <li>10. Contact Authorized Service Facility.</li> <li>11. Contact Authorized Service Facility.</li> <li>12. Contact Authorized Service Facility.</li> </ol>
Engine shuts down during operation.	<ol style="list-style-type: none"> <li>1. Out of gasoline.</li> <li>2. Low oil level.</li> <li>3. Fault in engine.</li> </ol>	<ol style="list-style-type: none"> <li>1. Fill fuel tank.</li> <li>2. Fill crankcase to proper level.</li> <li>3. Contact Authorized Service Facility.</li> </ol>
Engine lacks power.	<ol style="list-style-type: none"> <li>1. Load is too high.</li> <li>2. Dirty air filter.</li> <li>3. Engine needs to be serviced.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce load (see "Don't Overload the Generator").</li> <li>2. Clean or replace air filter.</li> <li>3. Contact Authorized Service Facility.</li> </ol>
Engine "hunts" or falters.	<ol style="list-style-type: none"> <li>1. Choke is opened too soon.</li> <li>2. Carburetor is running too rich or too lean.</li> </ol>	<ol style="list-style-type: none"> <li>1. Move choke to halfway position until engine runs smoothly.</li> <li>2. Contact Authorized Service Facility.</li> </ol>





## **FEDERAL EMISSION CONTROL WARRANTY STATEMENT YOUR WARRANTY RIGHTS AND OBLIGATIONS**

The United States Environmental Protection Agency (EPA) and Generac Power Systems, Inc. (Generac) are pleased to explain the Emission Control System Warranty (ECS Warranty) on your new 2011 and later equipment. New equipment that use small spark-ignited engines must be designed, built, and equipped to meet stringent anti-smog standards for the federal government. Generac will warrant the emission control system on your generator for the period of time listed below provided there has been no abuse, neglect, unapproved modification or improper maintenance of your equipment. The emission control system on this generator includes all components whose failure would increase the generator's emissions of any regulated pollutant. These components are listed in the Emissions Information section of this manual.

### **MANUFACTURER'S WARRANTY COVERAGE:**

This ECS Warranty is valid for two years, or for the same period as specified in the Generac Limited Warranty, whichever is longer. For generators equipped with hour meters, the warranty period is a number of hours equal to half the Useful Life to which the generator is certified, or the warranty period specified above in years, whichever is less. The Useful Life can be found on the Emission Control Label on the generator. If, during such warranty period, any emission-related part on your equipment is found to be defective in materials or workmanship, repairs or replacement will be performed by a Generac Authorized Warranty Service Dealer.

### **OWNER'S WARRANTY RESPONSIBILITIES:**

As the generator owner, you are responsible for the completion of all required maintenance as listed in your factory supplied Owner's Manual. For warranty purposes, Generac recommends that you retain all receipts covering maintenance on your generator, but Generac cannot deny warranty solely due to the lack of receipts.

As the generator owner, you should be aware that Generac may deny any and/or all warranty coverage or responsibility if your generator, or a part/component thereof, has failed due to abuse, neglect, improper maintenance, or unapproved modifications.

You are responsible for contacting a Generac Authorized Warranty Dealer as soon as a problem occurs. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

Warranty service can be arranged by contacting either your selling dealer or a Generac Authorized Warranty Service Dealer. To locate the Generac Authorized Warranty Service Dealer nearest you, call our toll free number below, or email [emissions@generac.com](mailto:emissions@generac.com).

**1-800-333-1322**

**IMPORTANT NOTE:** This warranty statement explains your rights and obligations under the Emission Control System Warranty, which is provided to you by Generac pursuant to federal law. See also the "Generac Limited Warranties for Generac Power Systems, Inc.," which is enclosed herewith on a separate sheet, also provided to you by Generac. Note that this warranty shall not apply to any incidental, consequential or indirect damages caused by defects in materials or workmanship or any delay in repair or replacement of the defective part(s). This warranty is in place of all other warranties, expressed or implied. Specifically, Generac makes no other warranties as to the merchantability or fitness for a particular purpose. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

The ECS Warranty applies only to the emission control system of your new equipment. Both the ECS Warranty and the Generac Warranty describe important rights and obligations with respect to your new engine.

Warranty service can be performed only by a Generac Authorized Warranty Service Facility. When requesting warranty service, evidence must be presented showing the date of the sale to the original purchaser/owner.

If you have any questions regarding your warranty rights and responsibilities, you should contact Generac at the following address:

**ATTENTION WARRANTY DEPARTMENT  
GENERAC POWER SYSTEMS, INC.  
P.O. BOX 297 • WHITEWATER, WI 53190**

*Part 1*



## EMISSION CONTROL SYSTEM WARRANTY

Emission Control System Warranty (ECS Warranty) for equipment using small spark-ignited engines:

- (a) Applicability: This warranty shall apply to equipment that uses small off-road engines. The ECS Warranty period shall begin on the date the new equipment is purchased by/delivered to its original, end-use purchaser/owner and shall continue for the lesser of:
  - (1) The period of time specified in the Generac Limited Warranty enclosed herewith, but not less than 24 months, or
  - (2) For engines equipped with hour meters, a number of operating hours equal to half of the engine's useful life. The useful life is specified on the Emissions Control Label on the generator.
- (b) General Emissions Warranty Coverage: Generac warrants to the original, end-use purchaser/owner of the new engine or equipment and to each subsequent purchaser/owner that the ECS when installed was:
  - (1) Designed, built and equipped so as to conform with all applicable regulations; and
  - (2) Free from defects in materials and workmanship which cause the failure of a warranted part at any time during the ECS Warranty Period.
- (c) The warranty on emissions-related parts will be interpreted as follows:
  - (1) Any warranted part that is not scheduled for replacement as required maintenance in the Owner's Manual shall be warranted for the ECS Warranty Period. If any such part fails during the ECS Warranty Period, it shall be repaired or replaced by Generac according to Subsection (4) below. Any such part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period.
  - (2) Any warranted part that is scheduled only for regular inspection as specified in the Owner's Manual shall be warranted for the ECS Warranty Period. A statement in the Owner's Manual to the effect of "repair or replace as necessary" shall not reduce the ECS Warranty Period. Any such part repaired or replaced under the ECS Warranty shall be warranted for the remainder of the ECS Warranty Period.
  - (3) Any warranted part that is scheduled for replacement as required maintenance in the Owner's Manual shall be warranted for the period of time prior to first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part shall be repaired or replaced by Generac according to Subsection (4) below. Any such emissions-related part repaired or replaced under the ECS warranty shall be warranted for the remainder of the period prior to the first scheduled replacement point for that part.
  - (4) Repair or replacement of any warranted, emissions-related part under this ECS Warranty shall be performed at no charge to the owner at a Generac Authorized Warranty Service Facility.
  - (5) Notwithstanding the provisions of subsection (4) above, warranty services or repairs must be provided at Generac Authorized Service Facilities.
  - (6) When the engine is inspected by a Generac Authorized Warranty Service Facility, the purchaser/owner shall not be held responsible for diagnostic costs if the repair is deemed warrantable.
  - (7) Throughout the ECS Warranty Period, Generac shall maintain a supply of warranted emission-related parts sufficient to meet the expected demand for such parts.
  - (8) Any Generac authorized and approved emission-related replacement parts may be used in the performance of any ECS Warranty maintenance or repairs and will be provided without charge to the purchaser/owner. Such use shall not reduce Generac ECS Warranty obligations.
  - (9) No modifications, other than those explicitly approved by Generac, may be made to the generator. Unapproved modifications void this ECS Warranty and shall be sufficient ground for disallowing an ECS Warranty claim.
  - (10) Generac shall not be held liable hereunder for failures of any non-authorized replacement parts, or failures of any authorized parts caused by the use of non-authorized replacement parts.

### EMISSION RELATED PARTS MAY INCLUDE THE FOLLOWING (IF EQUIPPED):

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>1) FUEL METERING SYSTEM               <ul style="list-style-type: none"> <li>A. CARBURETOR AND INTERNAL PARTS</li> <li>B. FUEL TANK / CAP</li> <li>C. FUEL LINES</li> <li>D. EVAPORATIVE VENT LINES</li> <li>E. REGULATOR (GASEOUS FUELS)</li> </ul> </li> <li>2) AIR INDUCTION SYSTEM               <ul style="list-style-type: none"> <li>A. INTAKE MANIFOLD</li> <li>B. AIR FILTER</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>3) IGNITION SYSTEM               <ul style="list-style-type: none"> <li>A. SPARK PLUGS</li> <li>B. IGNITION COILS / MODULE</li> </ul> </li> <li>4) AIR INJECTION SYSTEM               <ul style="list-style-type: none"> <li>A. PULSE AIR VALVE</li> </ul> </li> <li>5) EXHAUST SYSTEM               <ul style="list-style-type: none"> <li>A. CATALYST</li> <li>B. EXHAUST MANIFOLD</li> </ul> </li> </ul> |
|---|--|

Part 2

# Warranty

## GENERAC POWER SYSTEMS “THREE YEAR” LIMITED WARRANTY FOR XP SERIES PORTABLE GENERATORS

For a period of three years from the date of original sale, Generac Power Systems, Inc. (Generac) warrants its XP Series generators will be free from defects in materials and workmanship for the items and period set forth below. Generac will, at its option, repair or replace any part which, upon examination, inspection and testing by Generac or a Generac Authorized Warranty Service Dealer, is found to be defective. Repair or replacement pursuant to this limited warranty shall not renew or extend the original warranty period. Any repaired product shall be warranted for the remaining original warranty period only. Any equipment that the purchaser/owner claims to be defective must be returned to and examined by the nearest Generac Authorized Warranty Service Dealer. All transportation costs under the warranty, including return to the factory, are to be borne and prepaid by the purchaser/owner. This warranty applies only to Generac XP Series portable generators and is not transferable from original purchaser. Save your proof-of-purchase receipt. If you do not provide proof of the initial purchase date, the manufacturer's shipping date of the product will be used to determine the warranty period.

### WARRANTY SCHEDULE

Consumer applications are warranted for three (3) years. Commercial and Rental applications are warranted for two (2) years or 1500 hours maximum, whichever comes first.

#### CONSUMER APPLICATION

YEAR ONE and TWO – Limited comprehensive coverage on Labor and Part(s) listed (proof of purchase and maintenance is required):

- Engine- All Components
- Alternator- All Components

YEAR THREE – Limited comprehensive coverage on Part(s) listed (proof of purchase and maintenance is required):

- Engine- All Components
- Alternator- All Components

#### COMMERCIAL/RENTAL APPLICATION

YEARS ONE and TWO – Limited comprehensive coverage on Labor and Part(s) listed (proof of purchase and maintenance is required):

- Engine- All Components
- Alternator- All Components

#### INTERNATIONAL APPLICATION

YEARS ONE – Limited comprehensive coverage on Labor and Part(s) listed (proof of purchase and maintenance is required):

- Engine- All Components
- Alternator- All Components

**NOTE:** For the purpose of this warranty “consumer use” means personal residential household or recreational use by original purchaser. This warranty does not apply to units used for Prime Power in place of utility where utility power service is present or where utility power service does not normally exist. Once a generator has experienced commercial or rental use, it shall thereafter be considered a non-consumer use generator for the purpose of this warranty.

### Guidelines:

1. All warranty repairs, must be performed and/or addressed by an Authorized/Certified Generac Power Systems Dealer, or branch thereof.
2. Units that have been resold are not covered under the Generac Power Systems Warranty, as this Warranty is not transferable.
3. Use of Non-Generac replacement part(s) will void the warranty in its entirety.
4. Generac may choose to Repair, Replace or Refund a piece of equipment.
5. Warranty Labor Rates are based on normal working hours. Additional costs for overtime, holiday or emergency labor costs for repairs outside of normal business hours will be the responsibility of the customer.
6. Warranty Parts shipment costs are reimbursed at ground shipment rates. Costs related to requests for expedited shipping will be the responsibility of the customer.
7. Batteries are warranted by the battery manufacturer.
8. Verification of required maintenance may be required for warranty coverage.

### THIS WARRANTY SHALL NOT APPLY TO THE FOLLOWING:

1. Costs of normal maintenance and adjustments.
2. Failures caused by any contaminated fuels, oils or lack of proper oil levels.
3. Repairs or diagnostics performed by individuals other than Honeywell/Generac authorized dealers not authorized in writing by Generac Power Systems.
4. Failures due, but not limited, to normal wear and tear, accident, misuse, abuse, negligence or improper use.
5. As with all mechanical devices, the Generac engines need periodic part(s) service and replacement to perform as designed. This warranty will not cover repair when normal use has exhausted the life of a part(s) or engine.
6. Failures caused by any external cause or act of God, such as collision, theft, vandalism, riot or wars, nuclear holocaust, fire, freezing, lightning, earth-quake, windstorm, hail, volcanic eruption, water or flood, tornado or hurricane.
7. Damage related to rodent and/or insect infestation.
8. Products that are modified or altered in a manner not authorized by Generac in writing.
9. Any incidental, consequential or indirect damages caused by defects in materials or workmanship, or any delay in repair or replacement of the defective part(s).
10. Failure due to misapplication.
11. Expenses related to “customer instruction” or troubleshooting where no manufacturing defect is found.
12. Rental equipment used while warranty repairs are being performed.
13. Starting batteries, fuses, light bulbs and engine fluids.

THIS WARRANTY IS IN PLACE OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. SPECIFICALLY, GENERAC MAKES NO OTHER WARRANTIES AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Any implied warranties which are allowed by law, shall be limited in duration to the terms of the express warranty provided herein. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. GENERAC'S ONLY LIABILITY SHALL BE THE REPAIR OR REPLACEMENT OF PART(S) AS STATED ABOVE. IN NO EVENT SHALL GENERAC BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF SUCH DAMAGES ARE A DIRECT RESULT OF GENERAC'S NEGLIGENCE. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights. You also have other rights from state to state.

**GENERAC POWER SYSTEMS, INC. • P.O. BOX 8 • Waukesha, WI 53187 • Ph: (888) GENERAC (436-3722) • Fax: (262) 544-4851**

**To locate the nearest Authorized Dealer visit our website [www.generac.com](http://www.generac.com)**