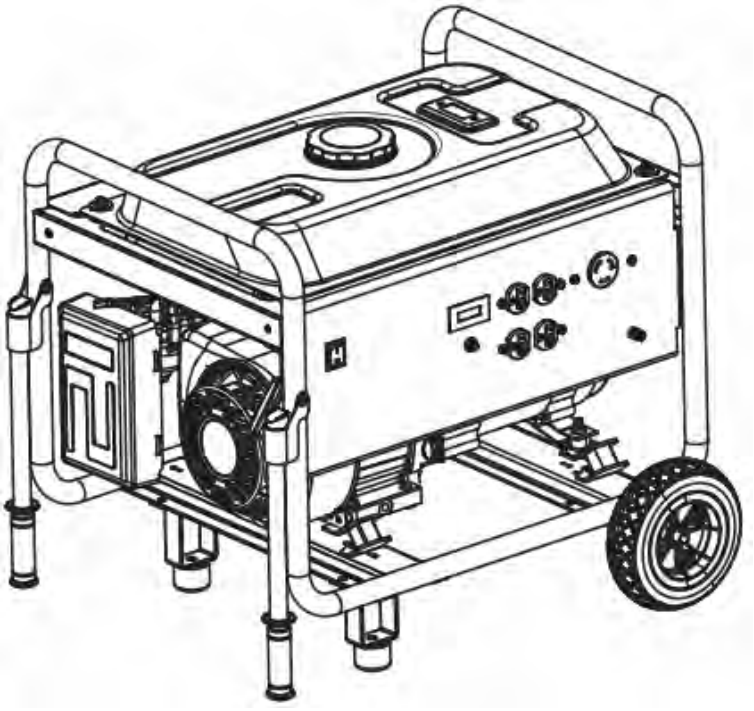
MODEL 4050
7.0 HP Generator

Item # 56405
Owner's Manual



DO NOT RETURN TO STORE

Questions? Problems?
Please call our customer help line:

(800) 232-1195 M-F 8-5 CST

FEATURES

- 4050 Starting Watt Output
- 3250 Running Watt Output
- 2-120 Volt Duplex Receptacles
- 1-120 Volt Twist Lock Receptacle
- Low Oil Automatic Shutoff
- Circuit Breaker for Overload Protection
- 3.1 Gallon Fuel Tank Capacity
- Spark Arrester
- Digital Hour Meter
- Mobility Kit included
- Meets EPA Emission Standards

GENERATOR IDENTIFICATION

For information and questions, please contact the Customer Service Help Line by calling **(800) 232-1195**. Certain information will be requested by the Customer Service Representative and to facilitate that, please fill in the information below.

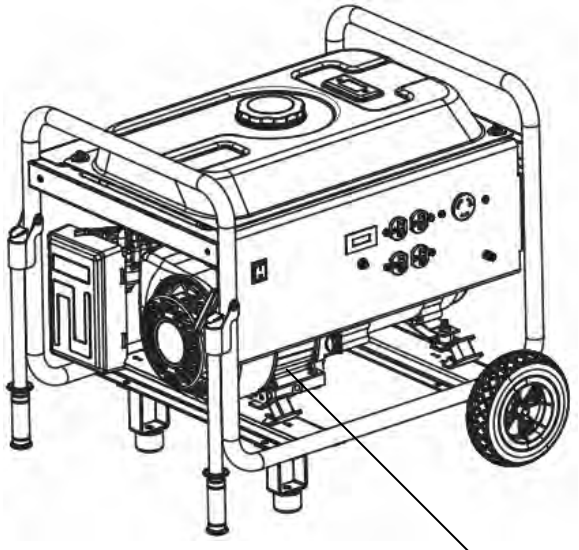
Refer to the illustration below for the location of Serial Number. Record generator information in the spaces provided below.

DATE OF PURCHASE: _____

PURCHASED FROM: _____

GENERATOR MODEL NUMBER: _____

ENGINE SERIAL NUMBER: _____



ENGINE SERIAL NUMBER

SERVICE RECORD

Record Service Dates:

	Date	Date	Date	Date	Date	Date
Oil Change						
Change spark plug						
Clean Fuel Tank						
Clean Filter Cup						
Clean Air Cleaner						
Carburetor Maintenance						

TABLE OF CONTENTS

INTRODUCTION

Thank You for Purchasing a Powerpro Technology™ Product.

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This manual provides information regarding the safe operation and maintenance of this product. Every effort has been made to ensure the accuracy of the information in this manual. Powerpro Technology™ reserves the right to change this product and specifications at any time without prior notice.

Please keep this manual available to all users during the entire life of the generator.

Special Messages

This manual contains special messages to bring attention to potential safety concerns, generator damage as well as helpful operating and servicing information. Please read all the information carefully to avoid injury and machine damage.

Questions? Problems?

DO NOT RETURN TO STORE

Store personnel where the generator was purchased are not trained to handle technical questions or problems.

In order to answer questions and solve problems in the most efficient and speedy manner, contact Customer Service at:

(800) 232-1195 M-F 8-5 CST

NOTICE REGARDING EMISSIONS

Engines that are certified to comply with U.S. EPA emission regulations for SORE (Small Off Road Equipment), are certified to operate on regular unleaded gasoline, and may include the following emission control systems: (EM) Engine Modifications and (TWC) Three-Way Catalyst (if so equipped).

SAFETY INFORMATION

Before operating this generator read and observe all warnings, cautions, and instructions on this sheet, on the generator, and in the Owner's Manual.

NOTE: The following safety information is not meant to cover all possible conditions and situations that may occur. Read the entire Owner's Manual for safety and operating instructions. Failure to follow instructions and safety information could result in serious injury or death.

This safety alert symbol is used to identify safety information about hazards that can result in personal injury.

A signal word (**DANGER**, **WARNING**, or **CAUTION**) is used with the alert symbol to indicate the likelihood and the potential severity of injury. In addition, a hazard symbol may be used to represent the type of hazard.

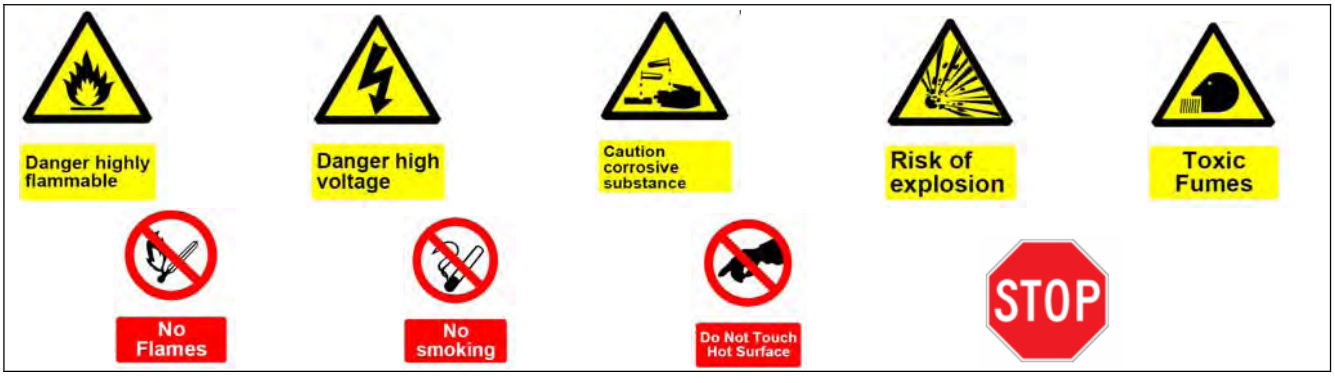
DANGER indicates a hazard, which, if not avoided, **will result in death or serious injury.**

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

CAUTION indicates a hazard, which, if not avoided, **might result in minor or moderate injury.**

CAUTION, when used **without** the alert symbol, indicates a situation that **could result in damage to the engine or generator.**

SAFETY SYMBOLS AND MEANINGS



GENERAL SAFETY PROCEDURES

For any questions regarding the hazard and safety notices listed in this manual or on the product, please call **(800) 232-1195 M-F 8-5 CST** before using the generator.

DANGER: CARBON MONOXIDE. Using a generator indoors CAN KILL YOU IN MINUTES.

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

- **NEVER use a generator inside homes, garages, crawlspaces, or other partly enclosed areas. Deadly levels of carbon monoxide can build up in these areas. Using a fan or opening windows and doors does NOT supply enough fresh air.**
- **ONLY use a generator outside and far away from windows, doors, and vents. These openings can pull in generator exhaust.**

Even if you use a generator correctly, CO may leak into the home. ALWAYS use a battery-powered or battery-backup CO alarm in the home.
If you start to feel sick, dizzy, or weak after the generator has been running, move to fresh air RIGHT AWAY. See a doctor. You may have carbon monoxide poisoning.

WARNING: The exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

WARNING: This generator may emit highly flammable and explosive gasoline vapors, which can cause severe burns or even death, if ignited. A nearby open flame can lead to explosion even if not directly in contact with gasoline.

- **Do not operate near open flame.**
- **Do not smoke near generator.**
- **Always operate on a firm, level surface.**
- **Always turn generator off before refueling. Allow generator to cool for at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank.**
- **Do not overfill fuel tank. Gasoline may expand during operation. Do not fill to the top of the tank. Allow for expansion.**
- **Always check for spilled fuel before operating.**
- **Empty fuel tank before storing or transporting the generator.**
- **Before transporting, turn fuel valve to off and disconnect spark plug wire.**

WARNING: This generator produces powerful voltage, which can result in electrocution.

- **ALWAYS ground the generator before using it (see the "Ground the Generator" portion of the "GENERATOR PREPARATION" section).**
- **Generator should only be plugged into electrical devices, either directly or with an extension cord. NEVER connect to a building electrical system without a qualified electrician. Such connections must comply with local electrical laws and codes. Failure to comply can create a back-feed, which may result in serious injury or death to utility workers.**
- **Use a ground fault circuit interrupter (GFCI) in highly conductive areas such as metal decking or steel work. GFCIs are available in-line with some extension cords.**
- **Do not use in rainy conditions.**
- **Do not touch bare wires or receptacles (outlets).**
- **Do not allow children or non-qualified persons to operate.**

WARNING: This generator produces heat when running. Temperatures near exhaust can exceed 150º F (65º C).

- **Do not touch hot surfaces. Pay attention to warning labels on the generator identifying hot parts of the machine.**
- **Allow generator to cool down after use before touching engine or areas of the generator that become hot during use.**

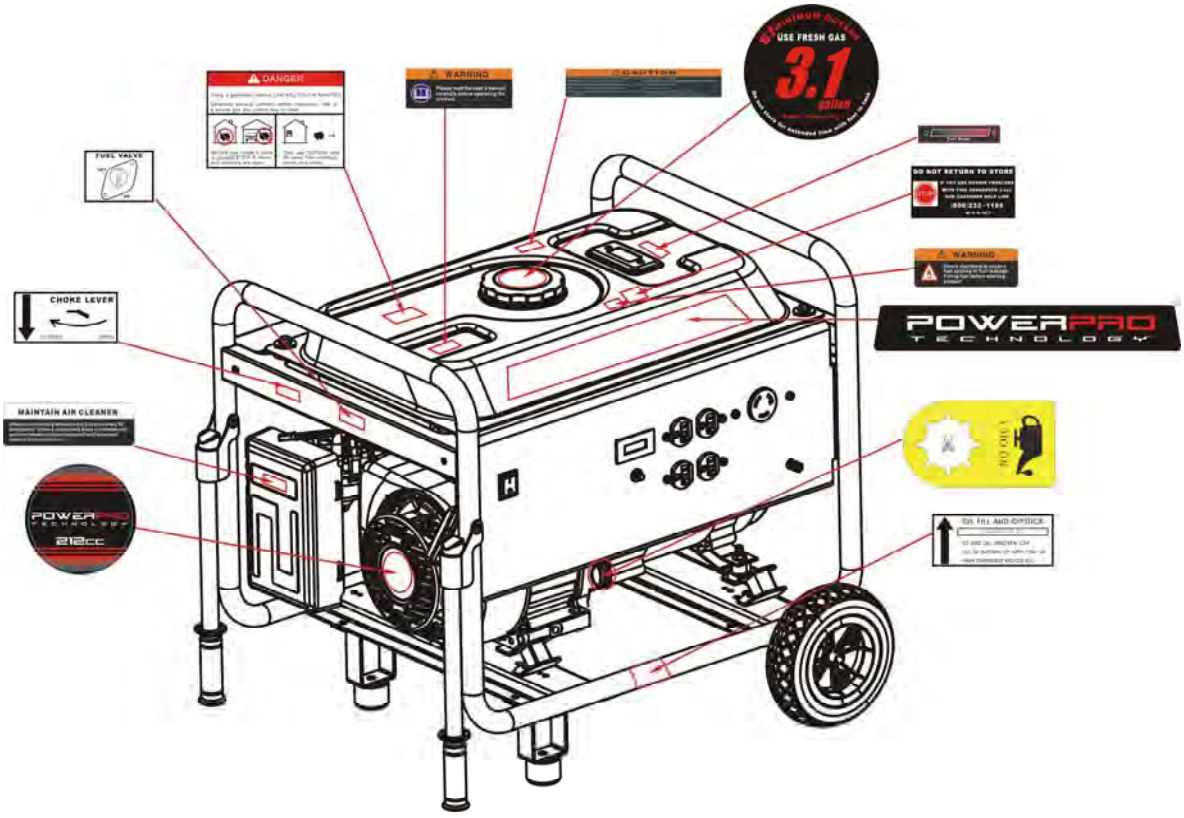
CAUTION: Misuse of this generator can damage it or shorten its life.

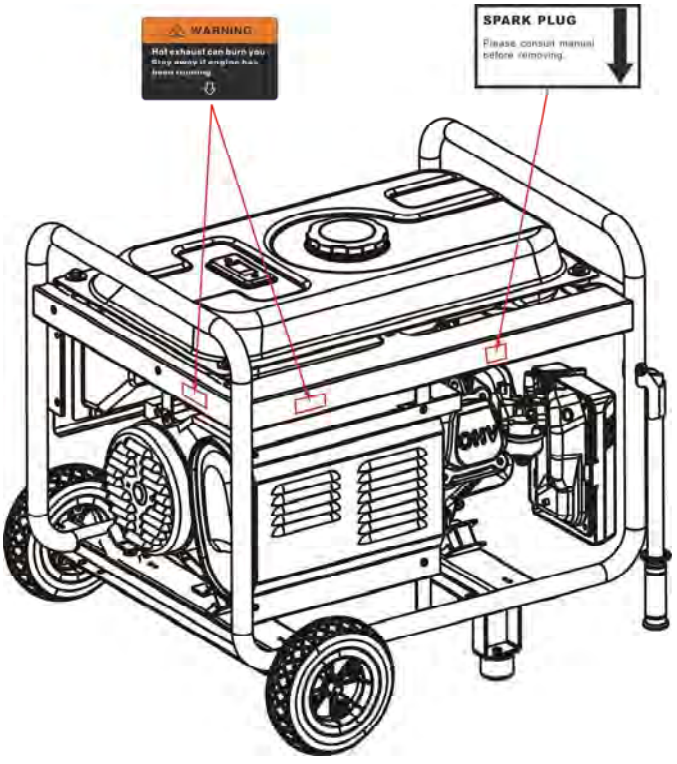
- Use generator only for its intended purposes.
- Operate only on dry, level surfaces.
- Allow generator to run for several minutes before connecting electrical devices.
- Shut off and disconnect any malfunctioning devices from generator.
- Do not exceed the wattage capacity of the generator by plugging in more electrical devices than the unit can handle.
- Do not turn on electrical devices until *after* they are connected to the generator.
- Turn off all connected electrical devices before stopping the generator.
- Turn the switch to "OFF" position when the engine is not running.

IMPORTANT SAFETY INSTRUCTIONS

- **SAVE THESE INSTRUCTIONS** – This manual contains important instructions for Powerpro Technology 4050 generator that should be followed during installation and maintenance of the generator.
- Generators vibrate in normal use. During and after the use of the generator, inspect the generator as well as extension and power supply cords connected to it for damage resulting from vibration. Have damaged items repaired or replaced as necessary. Do not use plugs or cords that show signs of damage such as broken or cracked insulation or damaged blades.
- For power outages, permanently installed stationary generators are better suited for providing backup power to the home. Even a properly connected portable generator can become overloaded. This may result in overheating or stressing the generator components, possibly leading to a generator failure.
- **WARNING:** When this generator is used to supply a building wiring system: Generator must be installed by a qualified electrician and connected to a transfer switch as a separately derived system in accordance with the National Electrical Code, NFPA 70. The generator shall be connected to a transfer switch that switches all conductors other than the equipment grounding conductor. The frame of the generator shall be connected to an approved grounding electrode.

In addition to the previous safety notices, please become familiar with the safety and hazard markings on the generator.





PACKAGE CONTENTS

Your generator comes with the items listed below. Please check to see that all of the following items are included with your generator.

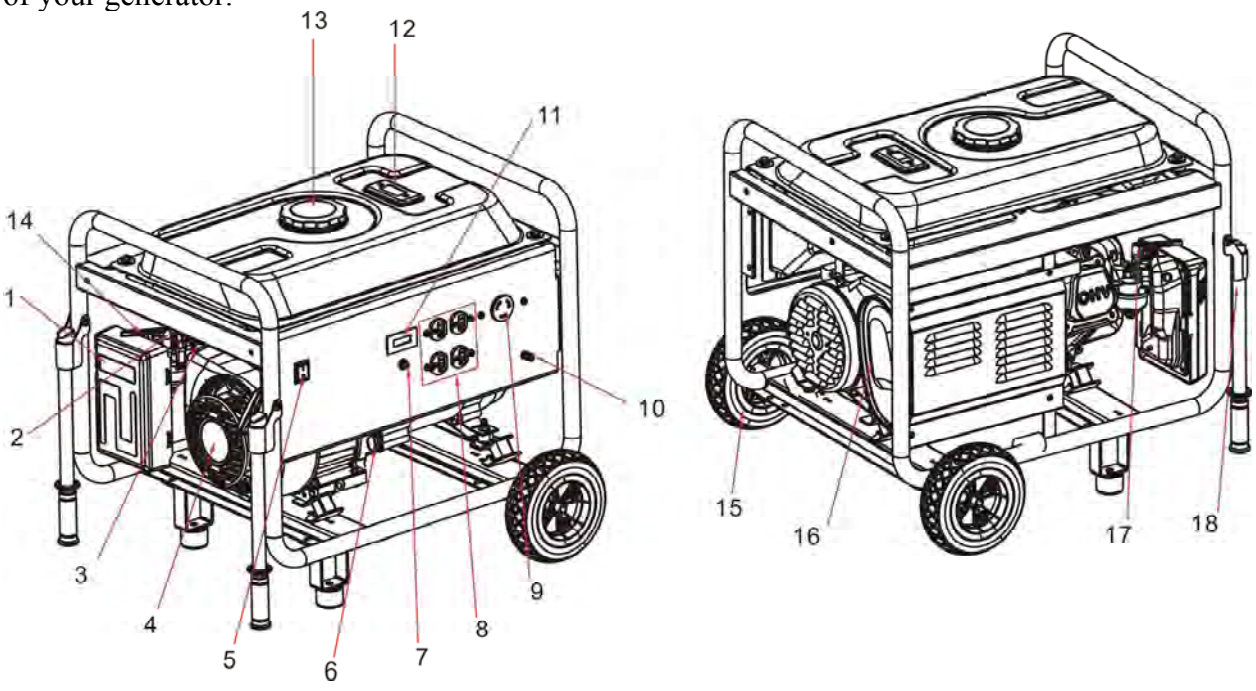
If there are any damaged or missing items, please call (800) 232-1195 M-F 8-5 CST for customer service. DO NOT RETURN TO STORE. Store personnel are not trained to assist with damaged or missing items.

ITEM LIST

	NEMA L5-30 locking plug for 120V devices
	Spark plug wrench
	Mobility kit
	wrenches

GENERATOR COMPONENTS

Please familiarize yourself with the locations and functions of the various components and controls of your generator.



(1) Air Cleaner- A removable, cleanable, sponge-like element that limits the amount of dirt pulled into the engine.
(2) Fuel Valve- Allows fuel to enter engine.
(3) Fuel Filter Cup- Traps dirt and water from fuel before it enters the engine.
(4) Recoil Starter- Pull-cord for starting engine.
(5) Engine Switch- To start/stop engine.
(6) Oil Fill and Dipstick- Location for checking and filling engine oil.
(7) Circuit Reset Button-Reset button that protect the generator from electrical overload**.**
(8) 120 Volt AC Duplex Receptacle- To connect electrical devices that run 120 Volt, 60 Hz, single phase, AC current, rated 20 amps
(9) 120 Volt AC Twist lock Receptacle- To connect electrical devices that run 120 Volt, 60 Hz, single phase, AC current, rated 30 amps.
(10) Ground Terminal- Connect grounding wires here to properly ground unit.
(11) Engine Hourmeter- Tracks hours of operation.
(12) Fuel Gauge- Indicates the amount of fuel in the tank.
(13) Fuel Cap- Access to the fuel tank for adding fuel.
(14) Choke Lever- Adjusts the amount of air let into the engine.
(15) Wheel
(16) Muffler with Spark Arrester- Reduces engine noise.
(17) Spark Plug- Provides proper engine ignition.
(18) Handle

ASSEMBLY

Step 1 – Wheel Installation

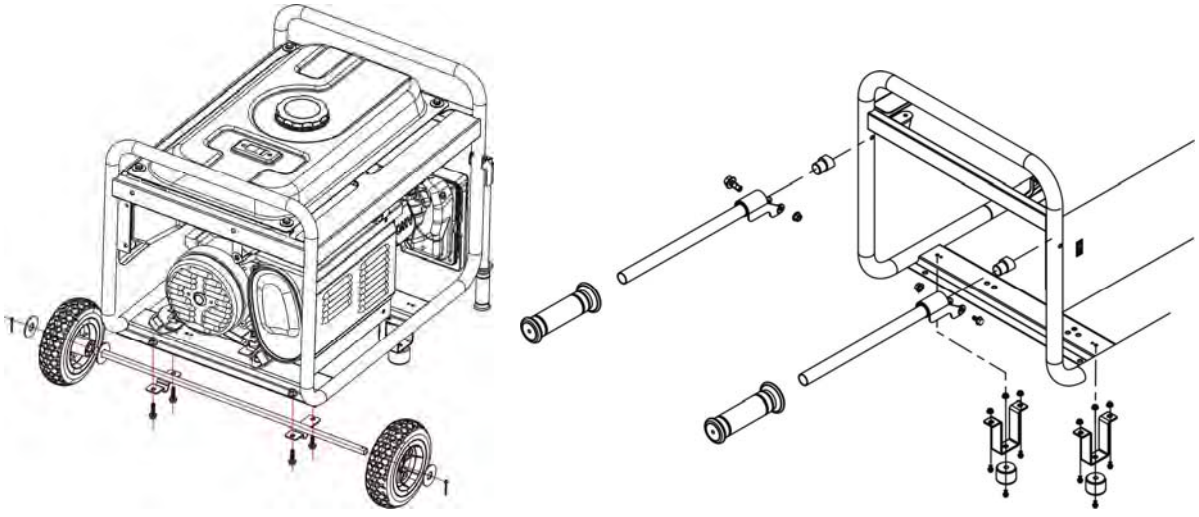
1. Blocking up the muffler side of the generator, assemble the axle to the frame.
2. Slide the wheel and washer onto the axle, with the offset of the wheel hub against the frame.
3. Secure the wheel to the axle with the cotter pin.
4. Repeat above instructions for the remaining wheel.

Step 2 –Foot Installation

1. Blocking up the engine side of the generator, assemble the rubber foot to the frame.
2. Repeat above instructions for the remaining foot.

Step 3 –Handle Installation

1. Assemble the handle to the frame (align with hole in tubing). Slide the bolt through handle, frame and washer and secure with the nut. Tighten until handle is securely clamped to the frame.
2. Repeat above instruction for remaining handle.



GENERATOR PREPARATION

<u>Using the Generator for the First Time</u>

The following section describes steps necessary to prepare the generator for use. If after reading this section, you are unsure about how to perform any of the steps please call (800) 232-1195 M-F 8-5 CST for customer service. Failure to perform these steps properly can damage the generator or shorten its life.

Step 1 - Fill Oil

The generator is shipped without oil. User must add the proper amount of oil before operating the generator for the first time. The oil capacity of the engine crankcase is 20 fluid oz.

Select good quality detergent oil bearing the American Petroleum Institute (API) service classifications SJ, SL, or SM. (Synthetic oils may be used.) Use the SAE viscosity grade of oil from the following chart that matches the starting temperature anticipated before the next oil changes.

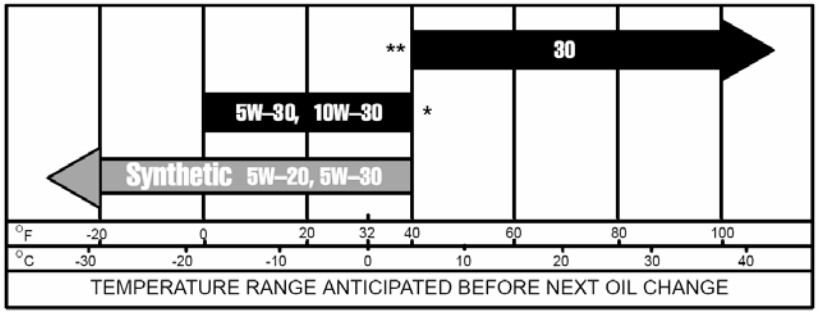


Figure 1- Engine oil recommendations

To fill oil to the crankcase, follow these steps:

1. Make sure the generator is on a level surface. **Tilting the generator to assist in filling will cause oil to flow into engine areas and will cause damage. <u>Keep generator level!</u>**
2. Remove the oil filler/dipstick cap from the engine as shown in figure 2.
3. Using a funnel, add the appropriate type and amount of oil into the crankcase. The crankcase is full when the oil level has reached the second thread from the lip of the opening (see figure 3).
4. Check for oil leaks. Reinstall oil filler cap before starting engine.

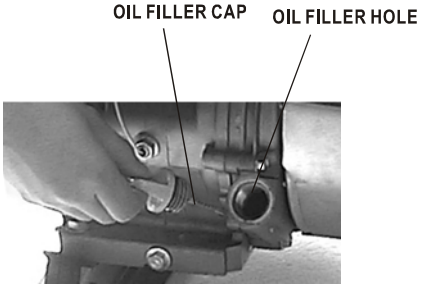


Figure 2- Unscrewing the oil cap

Figure 3- filling oil

Step 2- Add Gasoline

WARNING: This generator may emit highly flammable and explosive gasoline vapors, which can cause severe burns or even death if ignited. A nearby open flame can lead to explosion even if not directly in contact with gasoline.

- **Do not operate near open flame.**
- **Do not smoke near generator.**
- **Always operate on a firm, level surface.**
- **Always turn generator off before refueling. Allow generator to cool for at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank.**
- **Do not overfill fuel tank. Gasoline may expand during operation. Do not fill to the top of the tank. Allow for expansion.**
- **Always check for spilled fuel before operating. Clean up any spilled fuel before starting.**
- **Empty fuel tank before storing or transporting the generator.**
- **Before transporting, turn fuel valve to off position and disconnect spark plug wire.**

Use fresh (within 30 days from purchase), unleaded gasoline with a minimum 87 octane rating. Do not use gasoline which contains Methanol. Do not mix oil with gasoline.

To add gasoline, follow these steps:

1. Make sure the generator is on a level surface.
2. Unscrew fuel cap and set aside (NOTE: the fuel cap may be tight and hard to unscrew).
3. Slowly add unleaded gasoline to the fuel tank. Be careful not to overfill. Please refer to the chart in figure 4 for the fuel capacity. The fuel gauge on the top of the generator indicates how much gasoline is in the generator fuel tank. NOTE: **Do not fill the fuel tank to the very top**. Gasoline will expand and spill over during use even with the fuel cap in place.
4. Reinstall fuel cap and wipe off any spilled gasoline with a dry cloth.

IMPORTANT:

- Never use an oil/gasoline mixture.
- Never use old gasoline.
- Avoid letting dirt or water into the fuel tank.
- Gasoline can age in the tank and make it hard to start up the generator in the future. Never store generator for extended periods of time with fuel in the tank.

Model number	4050
Fuel tank capacity	12 L (3.1 gallons)

Figure 4- Fuel Tank Capacity

Step 3- Ground the Generator

WARNING: Failure to properly ground the generator can result in electrocution.

Ground the generator by tightening the grounding nut against a grounding wire (see figure 5). A generally acceptable grounding wire is a No. 12 AWG (American Wire Gauge) stranded copper wire. This grounding wire should be connected at the other end to a copper or brass grounding rod that is driven into the earth. Wire and grounding rod are not included in generator contents.

Grounding codes can vary by location. Please contact a local electrician to check the grounding regulations for your area.

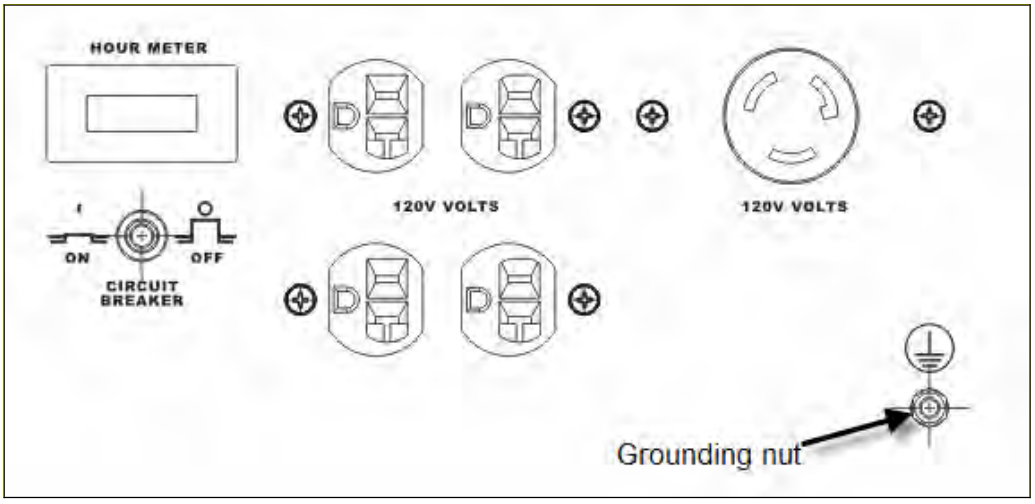


Figure 5- Grounding nut location

NOTE: After completing the 3-step Generator Preparation, the generator is ready to be started.

STARTING THE GENERATOR

Before starting the generator, make sure you have read and performed the steps in the "GENERATOR PREPARATION" section of this manual. If you are unsure about how to perform any of the steps in this manual please call (800) 232-1195 M-F 8-5 CST for customer service.

DANGER: CARBON MONOXIDE. Using a generator indoors CAN KILL YOU IN MINUTES.

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

- **NEVER use a generator inside homes, garages, crawlspaces, or other partly enclosed areas. Deadly levels of carbon monoxide can build up in these areas. Using a fan or opening windows and doors does NOT supply enough fresh air.**
- **ONLY use a generator outside and far away from windows, doors, and vents. These openings can pull in generator exhaust.**

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

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

WARNING: This generator produces powerful voltage, which can result in electrocution.

- **ALWAYS ground the generator before using it (see the "Ground the Generator" portion of the "GENERATOR PREPARATION" section).**
- **Generator should only be plugged into electrical devices, either directly or with an extension cord. NEVER connect to a building electrical system without a qualified electrician. Such connections must comply with local electrical laws and codes. Failure to comply can create a back-feed, which may result in serious injury or death to utility workers.**
- **Use a ground fault circuit interrupter (GFCI) in highly conductive areas such as metal decking or steel work. GFCIs are available in-line with some extension cords.**
- **Do not use in rainy or wet conditions.**
- **Do not touch bare wires or receptacles (outlets).**
- **Do not allow children or non-qualified persons to operate.**

CAUTION: Disconnect all electrical loads from the generator before attempting to start.

To start your generator, perform the following steps:

1. No electrical devices should be connected to the generator during starting. Devices can make it difficult for the engine to start.
2. Check that the generator is properly grounded (see "Ground the Generator").
3. Check the oil and fuel levels.
4. Turn the fuel valve to the "ON" position (see figure 6).
5. Move the choke lever to the "CLOSED" position (see figure 7).
6. Set the engine switch to the "ON" position.
7. Pull on the recoil starter grip slowly until a slight resistance is felt (see figure 8). Then pull quickly to start the engine. Return cord gently into the machine. Never allow the cord to snap back.
8. If engine fails to start, repeat step 7. NOTE: After repeated failed attempts to start the engine, please consult the troubleshooting guide before attempting again. If problems persist please call **(800) 232-1195 M-F 8-5 CST**.
9. Once the engine has started, **slowly** return the choke lever all the way to the "OPEN" position.
10. Allow the generator to run for several minutes before attempting to connect any electrical devices. This allows the generator to stabilize its speed and temperature.

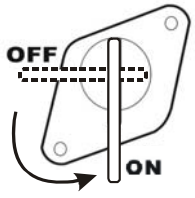


Figure 6- Fuel Valve in the "on" position

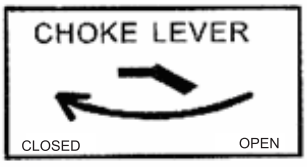


Figure 7- Push choke left to close. Pull lever right to open.

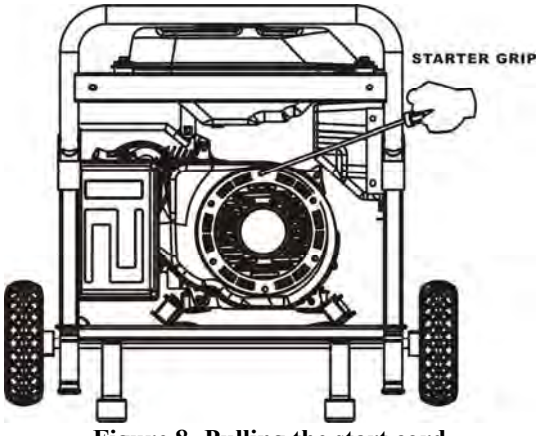


Figure 8- Pulling the start cord

SUBSEQUENT STARTING OF THE GENERATOR

If this is not the first time using the generator, user should take the following steps to prepare it for operation.

IMPORTANT: At this point the user should be familiar with the procedures described in the section titled "Using the Generator for the First Time." If the user has not yet read this section, go back and read it now.

Step 1- Check the Oil

Oil consumption is normal during generator usage. The generator is equipped with a low-oil shutoff to protect it from damage. The oil level in the engine should be checked before each use to ensure that the engine crankcase contains sufficient lubricant.

To check or add oil, follow these steps:

1. Make sure the generator is on a level surface. Clean around oil fill.
2. Remove the oil filler/dipstick cap and check oil level.
3. If oil level is below the second thread from the lip of the oil fill opening, slowly add oil until the engine crankcase is filled.
4. Reinstall and tighten oil filler cap before starting the engine. .

Step 2 – Check the Fuel Level

Before starting the generator, check to see that there is sufficient gasoline in the fuel tank. The fuel gauge on top of the generator will indicate the fuel level in the tank. Add gasoline if necessary but leave sufficient room in tank for expansion.

WARNING: This generator may emit highly flammable and explosive gasoline vapors, which can cause severe burns or even death if ignited. A nearby open flame can lead to explosion even if not directly in contact with fuel.

- **Do not operate near open flame.**
- **Do not smoke near generator.**
- **Always operate on a firm, level surface.**
- **Always turn generator off before refueling. Allow generator to cool for at least 2 minutes before removing fuel cap. Loosen cap slowly to relieve pressure in tank.**
- **Do not overfill fuel tank. Gasoline may expand during operation. Do not fill to the top of the tank. Allow for expansion.**
- **Always check for spilled fuel before operating. Clean up any spilled fuel before starting.**
- **Empty fuel tank before storing or transporting the generator.**
- **Before transporting, turn fuel valve to off and disconnect spark plug wire.**

IMPORTANT:

- Use only UNLEADED gasoline with an octane rating of 87 or higher.
- Do not use old gasoline.
- Never use an oil/gasoline mixture.
- Avoid letting dirt or water into the fuel tank.

Step 3- Ground the Generator

WARNING: Failure to properly ground the generator can result in electrocution.

Ground the generator by tightening the grounding nut on the front control panel against a grounding wire. (Figure 5) A generally acceptable grounding wire is a No. 12 AWG (American

Wire Gauge) stranded copper wire. This grounding wire should be connected at the other end to a copper, brass, or steel-grounding rod that is driven into the earth. Wire and grounding rod are not included in generator contents.

Grounding codes can vary by location. Contact a local electrician for area codes.

USING THE GENERATOR

WARNING: When this generator is used to supply a building wiring system: Generator must be installed by a qualified electrician and connected to a transfer switch as a separately derived system in accordance with the National Electrical Code, NFPA 70. The generator shall be connected to a transfer switch that switches all conductors other than the equipment grounding conductor. The frame of the generator shall be connected to an approved grounding electrode.

For power outages, permanently installed stationary generators are better suited for providing backup power to the home. Even a properly connected portable generator can become overloaded. This may result in overheating or stressing the generator components, possibly leading to a generator failure.

Before connecting electrical devices, allow the generator to run for a few minutes to stabilize the speed and voltage output.

CAUTION: Become familiar with the markings on the panel before connecting electrical devices.

Connect electrical devices running on AC current according to their wattage requirements. The chart in figure 9 shows the running and starting wattage of your generator according to its model number.

NOTE: Although the overall running wattage of the machine is 3250 Watts, it is not recommended that you attempt to draw more than 2400 Watts (20 A) from any ONE of the 120 Volt duplex receptacles. The duplex receptacles are rated 20amps.

The *running wattage* corresponds to the maximum wattage the generator can output on a continuous basis.

The *starting wattage* corresponds to the maximum amount of power the generator can output for a short period of time. Many electrical devices such as refrigerators require short bursts of extra power, in addition to the running wattage listed by the device, to stop and start their motors. The starting wattage ability of the generator covers this extra power requirement.

Model Number	Running Wattage	Starting Watt
4050	3250	4050

Figure 9- generator wattage by model number.

The total running wattage requirement of the electrical devices connected to the generator should not exceed the running wattage of the generator itself. To calculate the total wattage requirement of the electrical devices you wish to connect, find the rated (or running) wattage of each device. This number should be listed somewhere on the device or in its instruction manual. If you cannot find this wattage, you may calculate it by multiplying the Voltage requirement by the Amperage drawn:

Watts= Volts x Amperes

If these specifications are not available, you may estimate the Watts required by your device using the chart in figure 10.
When the running wattage requirement of each electrical device has been determined, add these numbers to find the total running wattage needed. If this number exceeds the running wattage of the generator, DO NOT connect all these devices. Select a combination of electrical devices, which has a total running wattage lower than or equal to the running wattage of the generator.

CAUTION: The generator can run at its surge wattage capacity for only a short time. Connect electrical devices requiring a rated (running) wattage equal to or less than the running wattage of the generator. Never connect devices requiring a running wattage equal to the starting wattage of the generator. This can trip the circuit protectors (circuit breakers).

tool or appliance	rated (running) Watts	additional starting Watts
electric water heater (40 gal)	4000	0
hot plate	2500	0
saw- radial arm	2000	2000
electric stove (each element)	1500-2800	0
saw- circular	1500	1500
air compressor (1 HP)	1500	3000
window air conditioner	1200	1800
saw- miter	1200	1200
microwave	1000	0
well water pump	1000	1000
reciprocating saw	960	1040
sump pump	800	1200
refrigerator freezer	800	1200
furnace blower	800	1300
computer	800	0
electric drill	600	900
television	500	0
deep freezer	500	500
garage door opener	480	0
stereo	400	0
box fan	300	600
clock radio	300	0
security system	180	0
DVD player/ VCR	100	0
common light bulb	75	0

NOTE: The above wattage figures are estimates. Try to check the wattage listed on your electrical device before consulting this chart.

Figure 10- Estimated wattage requirements of common electrical devices.

Once you have determined what electrical devices you will be powering with the generator, connect these devices according to the following procedure:

1. Plug in each electrical device with the device turned off. **NOTE:** Be sure to attach appliances to the correct receptacles (outlets). Connect standard 120 Volt, single phase, 60 Hz loads **only** to the 120 Volt receptacles. Connect 120 Volt, single phase, 60Hz loads with a NEMA L5-30 plug **only** to the 120 Volt receptacle See Figure 11 for a depiction of each of these receptacles.
2. Push in the circuit reset buttons to the "on" position (NOTE: They may be pushed in already).

CAUTION: Do not connect 50Hz or 3-phase loads to the generator.

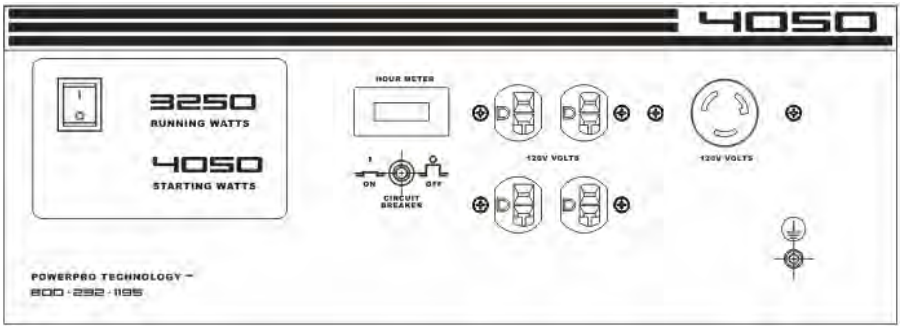


Figure 11- Receptacles available on the generator

CIRCUIT RESET BUTTONS

The circuit reset buttons help to prevent the generator from electrical overload. If your receptacle short circuits or becomes overloaded by an electrical device or devices with too great a wattage rating, the circuit protector may shut off power to the receptacle. In the event of such an overload, disconnect all electrical devices from the generator and press the circuit reset buttons. If power still does not return to the receptacle, call our customer service line.

SOME NOTES ABOUT POWER CORDS

Long or thin cords can drain the power provided to an electrical device by the generator. When using such cords, allow for a slightly higher running wattage requirement by the electrical device. See Figure 12 for recommended cords based on the power requirement of the electrical device.

Device Requirements			**Max. Cord Length (ft) by Wire Gauge**				
Amps	Watts (120V)	Watts (240 V)	#8 wire	#10 wire	#12 wire	#14 wire	#16 wire
2.5	300	600	NR	1000	600	375	250
5	600	1200	NR	500	300	200	125
7.5	900	1800	NR	350	200	125	100
10	1200	2400	NR	250	150	100	50
15	1800	3600	NR	150	100	65	NR
20	2400	4800	175	125	75	50	NR
25	3000	6000	150	100	60	NR	NR
30	3600	7200	125	65	NR	NR	NR
40	4800	9600	90	NR	NR	NR	NR

*NR= not recommended

Figure 12- Maximum Extension Cord Lengths by Power Requirement

STOPPING THE GENERATOR

Procedure to Stop Generator

NOTE: Stopping the motor or unplugging cords from the generator while it is supplying power to devices will possibly damage the voltage regulator and result in low or no power output until the voltage regulator is replaced.

Following the stopping procedure will minimize the possibility of damaged voltage regulators.

1. Turn off all electrical devices being powered by generator prior to unplugging them from the generator.
2. Turn the engine switch to the off position.
3. Turn the fuel valve to the off (horizontal) position.

Stopping when generator is to be stored for long period of time:

1. Turn off all electrical devices being powered by generator prior to unplugging them from the generator.
2. Turn the fuel valve to the off (horizontal) position. Allow engine to run until it stops.
3. If generator will be stored for more than 60 days, remove all fuel from the tank. Fuel removal is best accomplished by siphoning as much as is possible from the tank and then remove the fuel hose from the fuel cock, turn on the fuel valve and drain the remaining fuel from the tank.

WARNING: Allow the generator to cool for several minutes before touching areas that become hot during use.

CAUTION: Allowing gasoline to sit in the generator tank for long periods of time without use can make it difficult to start the generator in the future. Never store generator for extended periods of time with fuel in the tank.

MAINTENANCE / CARE

Proper routine maintenance of your generator will help prolong the life of your machine. Please perform maintenance checks and operations according the schedule in figure 13.

If you have questions about any of the maintenance procedures listed in this manual, please call **(800) 232-1195** M-F 8-5CST.

CAUTION: Never perform maintenance operations while the generator is running.

Recommended Maintenance Schedule

		each use	first month then every 20 hrs	every 3 months or 50 hrs	every 6 months or 100 hrs	every year or 300 hrs
Engine oil	check level	x				
	replace		x	x		
Air cleaner	check	x				
	clean			x		
fuel filter cup	clean				x	
spark plug	check/ clean				x	
fuel tank	check fuel level	x				
	clean					x

Figure 13- Recommended maintenance schedule

Cleaning the Generator

Never clean the generator when it is running! Never clean with a bucket of water or a hose. Water can get inside the working parts of the generator and cause a short circuit or corrosion. Always try to use the generator in a cool, dry place. If the generator becomes dirty, clean the exterior with a damp cloth, a soft brush, vacuum or pressurized air.

Checking the Oil

Check the oil level of the generator according to the Recommended Maintenance Schedule in Figure 13. The generator is equipped with an automatic shutoff to protect it from running with low oil pressure. The generator should be checked before each use for proper oil level. This is a critical step for proper engine starting.

To check or add oil, follow these steps:

1. Make sure the generator is on a level surface. Clean around oil fill.
2. Remove the oil filler/dipstick cap and check oil level.
3. If oil level is below the second thread from the lip of the oil fill opening, slowly add oil until the engine crankcase is filled.
4. Reinstall and tighten oil filler cap before starting the engine.

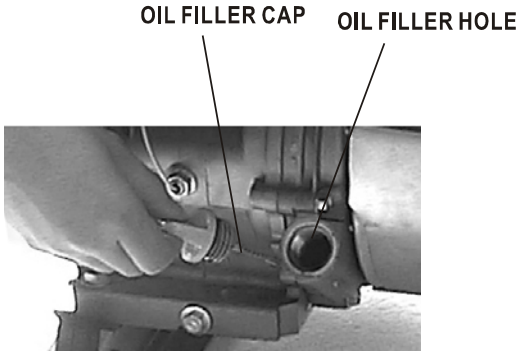


Figure 14- Checking the oil

Changing/ Adding Oil

Change the oil according to the maintenance schedule in figure 13. Change the oil when the engine is warm. This will allow for complete drainage. Change oil more often if operating under heavy load or high ambient temperatures. It is also necessary to drain the oil from the crankcase if it has become contaminated with water or dirt.

The oil capacity of the engine in this generator is 20 fluid oz. Add oil when the oil level is low.

Drain the oil from the generator according to the following steps:

1. Place a container underneath the engine to catch oil as it drains.
2. Using a 10 mm hex wrench, unscrew the oil drain plug (see figure 15). Allow all the oil to drain from the engine.
3. Reinstall the oil drain plug and tighten with a 10 mm hex wrench.

To fill the crankcase with oil, follow these steps:

1. Make sure the generator is on a level surface. **Tilting the generator to assist in filling will cause oil to flow into engine areas and will cause damage. Keep generator level!**
2. Remove the oil filler/dipstick cap from the engine as shown in figure 14 above.
3. Using a funnel, add the appropriate type and amount of oil into the crankcase. The crankcase is full when the oil level has reached the second thread from the lip of the opening (see figure 16).
4. Check for oil leaks. Reinstall oil filler cap before starting engine.

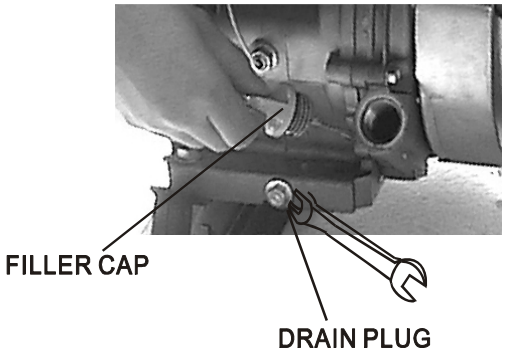


Figure 15- Draining oil

Figure 16- Adding oil

NOTE: Never dispose of used motor oil in the trash or down a drain. Please call your local recycling center or auto garage to arrange oil disposal.

Air Cleaner Maintenance

Routine maintenance of the air cleaner helps maintain proper air flow to the carburetor. Check that the air cleaner is free of excessive dirt.

1. Unhinge the clasps at the top and bottom of the air cleaner cover (see figure 17).
2. Remove the sponge-like elements from the cover.
3. Wipe the dirt from inside the empty air cleaner cover.
4. Wash the sponge-like elements in household detergent and warm water. Allow to dry.
5. Reinstall the sponge-like elements in the air cleaner casing and reinstall the cover.

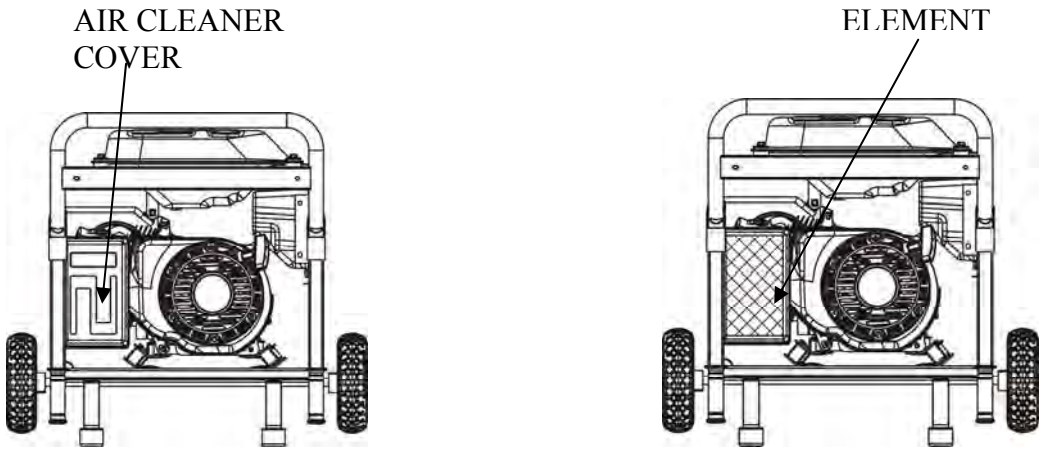


Figure 17- Air cleaner maintenance

Fuel Filter Cup Cleaning

The fuel filter cup is a small well underneath the fuel valve. It helps to trap dirt and water that may be in the fuel tank before it can enter the engine. To clean the fuel filter cup:

1. Turn the fuel valve to the "OFF" position.
2. Unscrew the fuel filter cup from the fuel valve using a wrench. Turn the valve toward you to unscrew (see figure 18).
3. Clean the cup of all sediment using a rag or brush.
4. Reinstall the fuel filter cup.

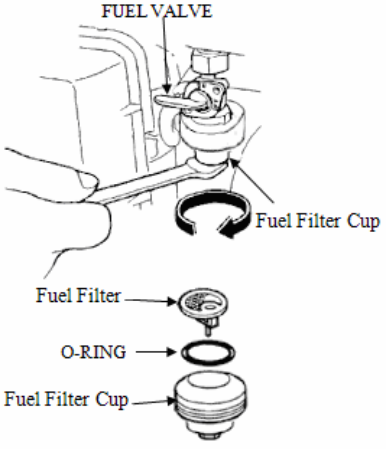


Figure 18- Removing the Fuel Filter Cup

Spark Plug Maintenance

The spark plug is important for proper engine operation. A good spark plug should be intact, free of deposits, and properly gapped. To inspect the spark plug:

1. Pull on the spark plug cap to remove it.
2. Unscrew the spark plug from the generator using the spark plug wrench included with this product (see figure 19).
3. Visually inspect the spark plug. If it is cracked or chipped, discard and replace with a new spark plug.
4. Measure the plug gap with a gauge (see figure 20). The gap should be 0.7-0.8mm (0.028-0.031in).
5. If you are re-using the spark plug, use a wire brush to clean any dirt from around the spark plug base and then re-gap the spark plug.
6. Screw the spark plug back into its place on the generator using the spark plug wrench. **Do not** over-tighten spark plug. Recommended tightening of spark plug is ½ to ¾ of a turn after spark plug gasket contacts spark plug hole. Reinstall the spark plug cap.

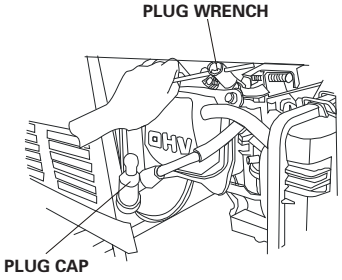


Figure 19- Removing the spark plug

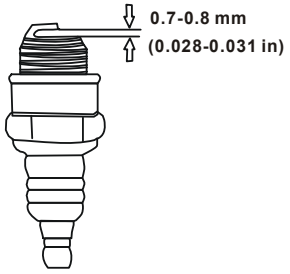


Figure 20- Measuring the spark plug gap

Spark Plug: NGK BPR6ES

Draining the Fuel Tank

Clean fuel tank each year or before storing the generator for extended periods of time. To drain the fuel tank and carburetor:

1. Turn the fuel valve to the "OFF" position.
2. Remove the fuel line between the fuel valve and carburetor. Caution: a small amount of fuel may leak from the hose during removal.
3. Attach a fuel line (not included with the generator) to exposed end of the fuel valve.
4. Position fuel line into an appropriate container and open the fuel valve allowing fuel to flow into the container.
5. Once fuel is drained, shut off the fuel valve.
6. Start and run the engine until fuel runs out.
7. Remove the fuel filter cup (see "Fuel Filter Cup Cleaning" earlier in this section).
8. Empty the fuel filter cup of any fuel and clean
9. Reinstall the fuel filter cup.
10. Store the emptied gasoline in a suitable place.

⚠ **CAUTION: Do not store fuel for more than 3 months.**

STORAGE / TRANSPORT PROCEDURES

CAUTION: Never place any type of storage cover on the generator while it is still hot.

If the generator is being stored for short periods of time (30 – 60 days), add stabilized fuel to the fuel tank until full. NOTE: Filling the tank reduces the amount of air in the tank and helps reduce deterioration of fuel. Run the engine for 2 – 3 minutes allowing stabilized fuel mixture to circulate through the carburetor.

When transporting or storing the generator for extended periods of time:

- Drain the fuel tank (see "Draining the Fuel Tank" in the "Maintenance" section).
- Disconnect the spark plug cap from the spark plug.
- Do not obstruct any ventilation openings.
- Keep the generator in a cool dry area.

SPECIFICATIONS

Generator

Running Wattage	3250 W
Starting Wattage	4050W
Rated Voltage	120 V
Rated Amperage	27A
Rated Frequency	60 Hz
Phase	Single
Dimensions(in) (without mobility kit)	length= 23.3 width= 18.3 height= 18
Weight	114 lbs

Engine

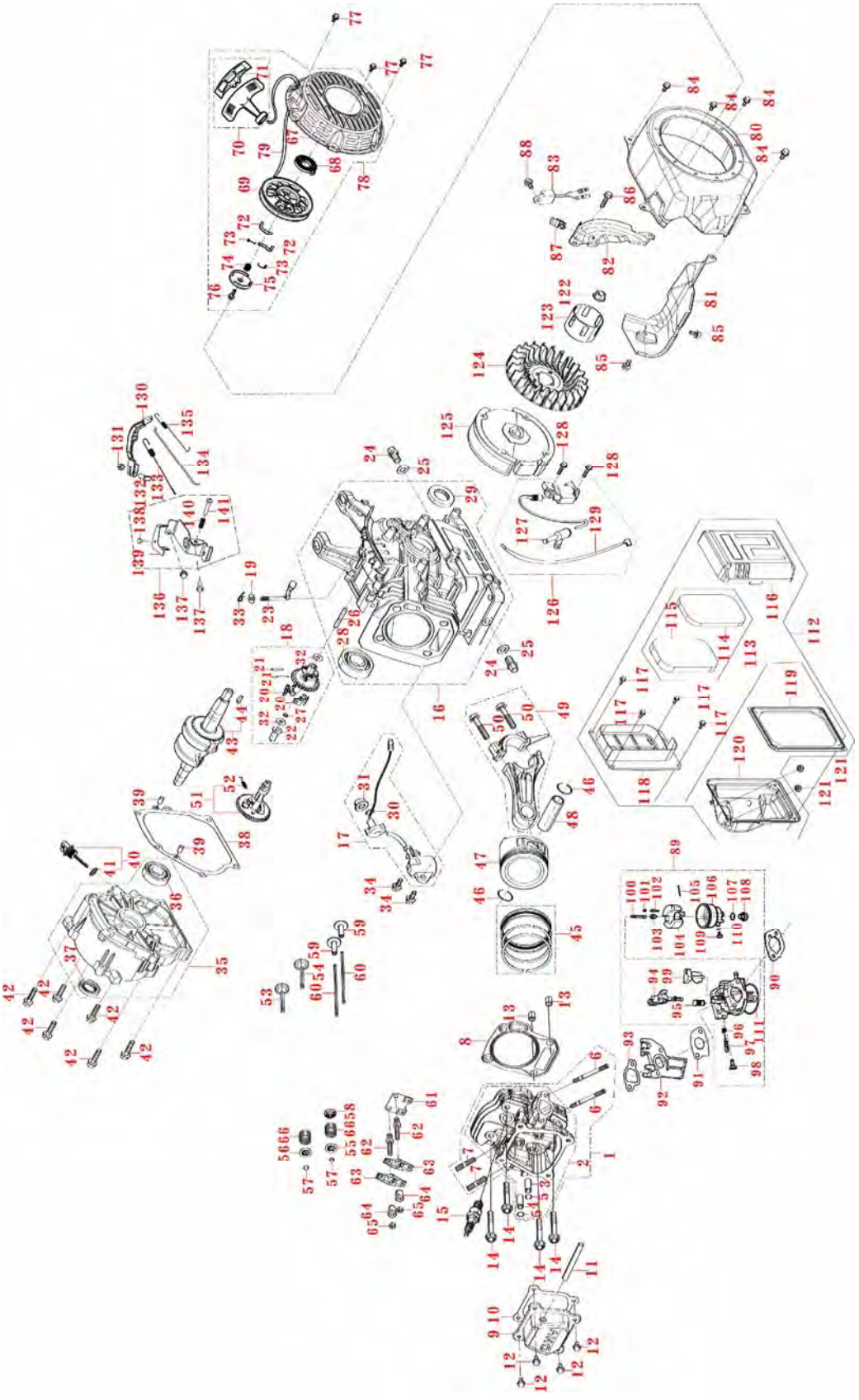
Engine type	4-stroke OHV single cylinder with forced air cooling system
Ignition system	non-contact transistor
Displacement	212 cm^3
Fuel tank capacity	12 L (3.1 US gal.)
Oil capacity	0.6 L (20 fl oz.)
Run time on 50% load	10 hrs
Noise rating at 22 feet	67 dB idle 74dB full power

TROUBLESHOOTING

IMPORTANT: If trouble persists please call our customer help line at **(800) 232-1195 M-F 8-5** Central Time.

Problem	Cause	Solution
Engine will not start	Engine switch is set to "OFF".	Set engine switch to "ON".
	Fuel valve is turned to "OFF".	Turn fuel valve to "ON" position.
	Choke is open.	Close the choke.
	Engine is out of fuel.	Add gasoline.
	Engine is filled with contaminated or old gasoline.	Change the gasoline in the engine.
	Spark plug is dirty.	Clean spark plug.
	Spark plug is broken.	Replace spark plug.
	Generator is not on level surface.	Move generator to a level surface to prevent low oil shutdown from triggering.
	Oil is low	Add or replace oil.
	Air cleaner is dirty.	Clean or replace air cleaner.
Engine runs but there is no electrical output	Circuit reset button is off.	Wait for 2 minutes and push the circuit reset button to the "ON" position.
	Bad connecting wires/cables.	If you are using an extension cord, try a different one.
	Bad electrical device connected to generator.	Try connecting a different device.
	Brush is worn.	Replace the brush.
Generator runs but does not support all electrical devices connected.	Generator is overloaded	Perform these steps: 1. Turn off all electrical devices. 2. Unplug all electrical devices. 3. Turn off generator. 4. Wait several minutes. 5. Restart generator. 6. Try connecting fewer electrical loads to the generator.
	Short in one of the connected devices.	Try disconnecting any faulty or short-circuited electrical loads.

ENGINE EXPLODED VIEW AND PARTS LIST



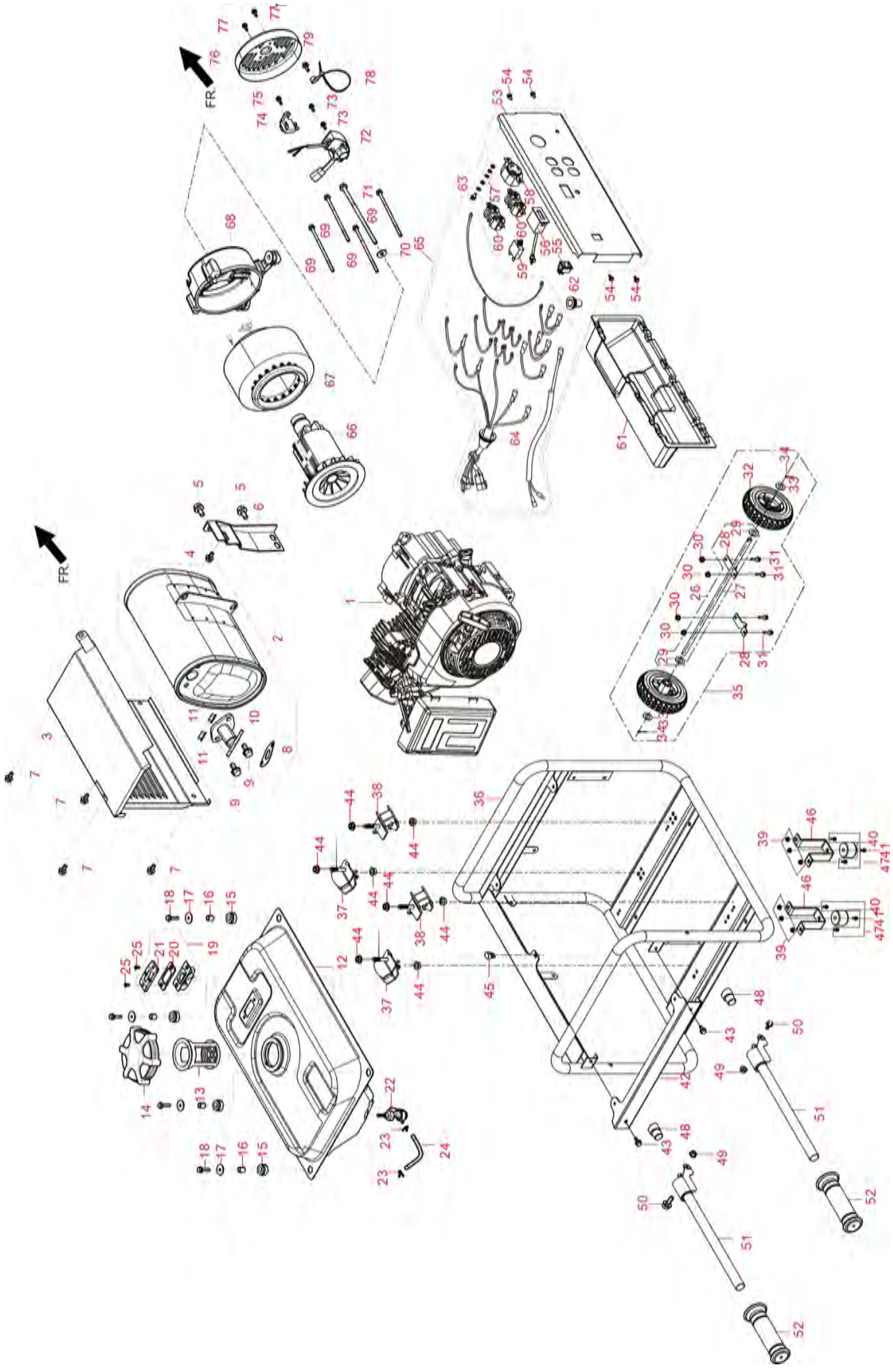
ITEM	DESCRIPTION
1	CYLINDER HEAD ASSEMBLY
2	CYLINDER HEAD SUBASSEMBLY
3	IN VALVE GUIDE
4	EX VALVE GUIDE
5	VALVE GUIDE CIRCLIP
6	INTAKE STUD
7	EXHAUST STUD
8	CYLINDER HEAD GASKET
9	CYLINDER HEAD COVER
10	CYLINDER HEAD COVER GASKET
11	BREATHER TUBE
12	BOLT
13	PIN
14	CYLINDER HEAD BOLT
15	SPARK PLUG
16	CRANKCASE ASSEMBLY
17	OIL SENSOR
18	GOVERNOR GEAR ASSEMBLY
19	WASHER
20	GOVERNOR GEAR WEIGHT
21	GOVERNOR GEAR SPINDLE
22	GOVERNOR SLIDER
23	GOVERNOR ARM
24	DRAIN BOLT
25	WASHER
26	GOVERNOR SPINDLE
27	CIRCLIP
28	BEARING
29	OIL SEAL
30	SEAL RING
31	NUT
32	GOVERNOR GEAR WASHER
33	PIN
34	BOLT
35	CRANKCASE COVER ASSEMBLY
36	BEARING
37	OIL SEAL
38	CRANKCASE GASKET
39	PIN
40	OIL DIPSTICK ASSEMBLY
41	SEAL RING
42	BOLT
43	CRANKSHAFT ASSEMBLY
44	KEY
45	PISTON RING ASSEMBLY
46	PISTON PIN CLIP
47	PISTON
48	PISTON PIN
49	CONNECTING ROD
50	CONNECTING ROD BOLT
51	CAMSHAFT ASSEMBLY
52	PIN
53	EXHAUST VALVE
54	INTAKE VALVE
55	INTAKE VALVE SPRING SEAT

ITEM	DESCRIPTION
56	EXHAUST VALVE SPRING SEAT
57	VALVE CAP
58	SEAL GUIDE
59	VALVE TAPPET
60	VALVE LIFTER
61	LIFTER GUIDE
62	VALVE ADJUSTING BOLT
63	VALVE ROCKER
64	VALVE ADJUSTING NUT
65	LOCK NUT
66	VALVE SPRING
67	RECOIL STARTER REEL COVER
68	STARTER COIL SPRING
69	RECOIL STARTER REEL
70	RECOIL STARTER HANDLE
71	HANDLE CORE
72	DRIVE CAM
73	RETURNING SPRING
74	SPRING
75	DRIVING GUIDE
76	GUIDE TRAY SCREW
77	BOLT
78	RECOIL STARTER ASSEMBLY
79	RECOIL STARTER CABLE
80	SHROUD
81	CYLINDER BODY SHROUD
82	LOWER SHIELD
83	OIL PROTECTOR
84	BOLT
85	BOLT
86	BOLT
87	COLLAR
88	BOLT
89	CARBURETOR ASSEMBLY
90	AIR CLEANER GASKET
91	CARBURETOR GASKET
92	CARBURETOR INSULATOR PLATE
93	CARBURETOR INSULATOR GASKET
94	THROTTLE VALVE SUBASSEMBLY
95	IDLE SPEED JET
96	SPRING
97	IDLE SPEED ADJUSTING BOLT
98	IDLE SPEED ADJUSTING SCREW
99	CHOKE LEVER
100	MAIN NOOZLE
101	SPRING FLOAT
102	VALVE FILLING OIL NEEDLE
103	MAIN JET
104	FLOAT
105	FLOAT PIN
106	DEPOSITON CUP
107	WASHER
108	CUP BOLT
109	CUP DRAIN PLUG
110	WASHER

ITEM	DESCRIPTION
111	FLOAT GASKET
112	AIR CLEANER ASSEMBLY
113	ELEMENT ASSEMBLY
114	ELEMENT 1
115	ELEMENT 2
116	AIR CLEANER COVER
117	BOLT
118	AIR CLEANER ELEMENT BRACKET
119	AIR CLEANER ELEMENT GASKET
120	AIR CLEANER BASE
121	NUT
123	FLYWHEEL NUT
124	STARTER PULLEY
125	FLYWHEEL FAN
126	IGNITION COIL ASSEMBLY
127	SPARK PLUG CAP

ITEM	DESCRIPTION
128	BOLT
129	STOP ENGINE WIRE
130	REGULATING ARM
131	NUT
132	REGULATING BOLT
133	GOVERNOR SPRING
134	GOVERNOR ROD
135	SMALL GOVERNOR SPRING
136	THROTTLE CONTROL ASSEMBLY
137	BOLT
138	THROTTLE COMBINED PIN
139	THROTTLE PANEL
140	STOPPER ADJUSTING SPRING
141	SCREW

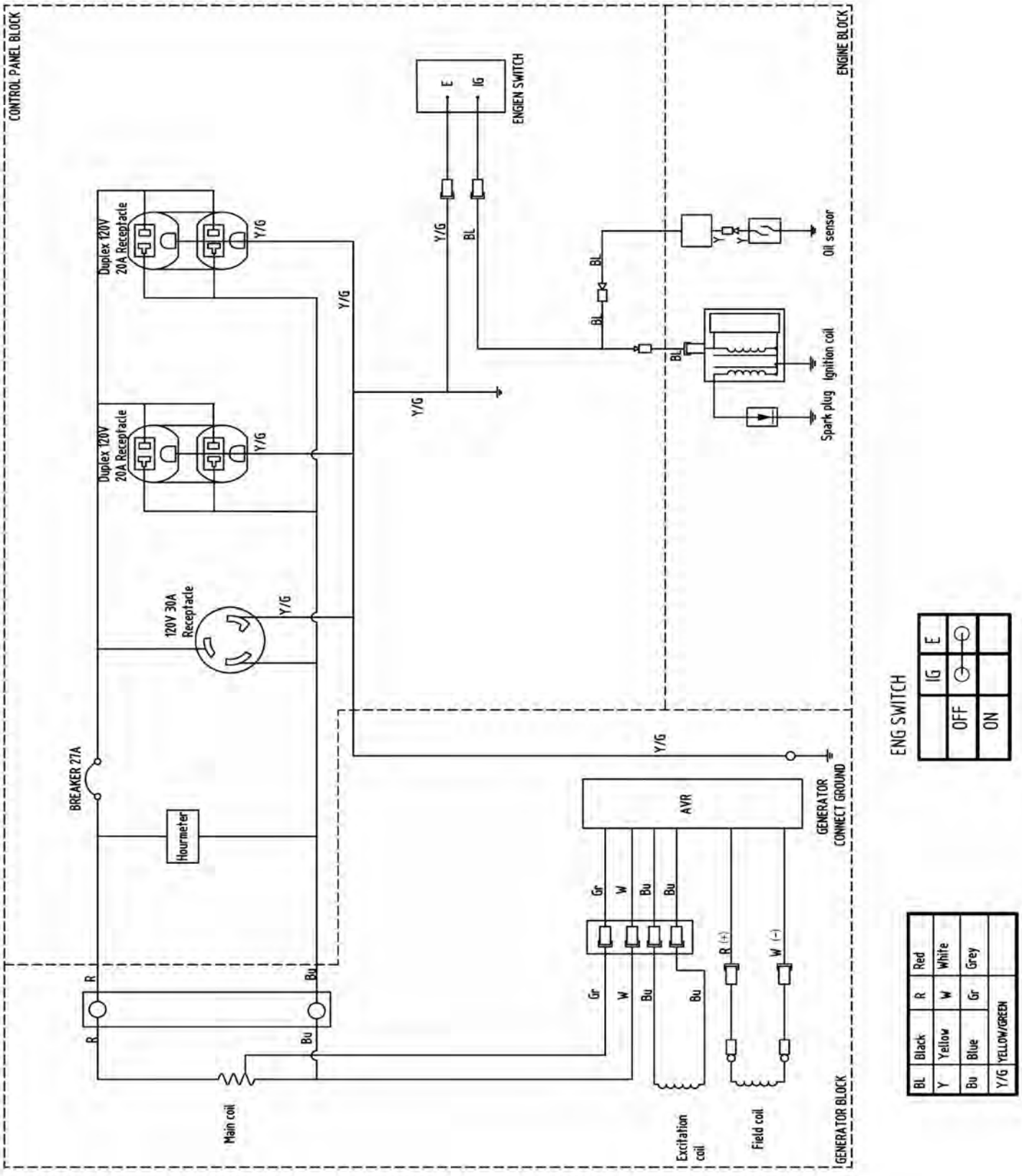
GENERATOR EXLODED VIEW AND PARTS LIST



ITEM	DESCRIPTION
1	ENGINE ASSEMBLY
2	MUFFLER ASSEMBLY
3	MUFFLER GUIDE
4	BOLT
5	BOLT
6	BRACKET
7	BOLT
8	EXHAUST OUTLET GASKET
9	BOLT
10	EXHAUST PIPE
11	NUT
12	FUEL TANK
13	FUEL FILTER
14	FUEL CAP
15	FUEL TANK RUBBER
16	BUSH
17	WASHER
18	BOLT
19	FUEL GAUGE ASSEMBLY
20	FUEL GAUGE GASKET
21	FUEL GAUGE PLATE
22	FUEL COCK ASSEMBLY
23	TUBE CLIP
24	FUEL TUBE
25	SCREW
26	AXLE ASSEMBLY
27	AXLE
28	AXLE BRACKET
29	WASHER
30	NUT
31	SCREW
32	WHEEL
33	WASHER
34	COTTER PIN
35	WHEEL ASSEMBLY
36	FRAME
37	BUTTOM RUBBER A
38	BUTTOM RUBBER B
39	NUT

ITEM	DESCRIPTION
40	RUBBER FOOT
41	SCREW
42	CROSSPIECE
43	SCREW
44	NUT
45	FRAME RUBBER PAD
46	FOOT BRACKET
47	RUBBER FOOT ASSEMBLY
48	RUBBER SEAT
49	NUT
50	BOLT
51	HANDLE
52	HANDLE GRIP
53	CONTROL PANEL
54	SCREW
55	ENGINE SWITCH
56	HOUR METER
57	GROUND TERMINAL
58	120V 30A RECEPTACLE
59	CIRCUIT BREAKER
60	DUPLEX RECEPTACLE
61	CONTROL PANEL CASE
62	SLEEVE
63	WIRE HARNESS
64	SLEEVE
65	CONTROL PANEL ASSEMBLY
66	ROTOR ASSEMBLY
67	STATOR ASSEMBLY
68	MOTOR HOUSING
69	BOLT
70	WASHER
71	BOLT
72	VOLTAGE REGULATOR
73	SCREW
74	BRUSH ASSEMBLY
75	SCREW
76	END COVER
77	SCREW
78	CABLE TIE
79	SCREW

WIRING DIAGRAM



NOTES:

WARRANTY STATEMENT
FOR POWERPRO TECHNOLOGY PRODUCTS

PowerPro Technology™ generators are warranted (to the original purchaser) to be free from defects in materials and workmanship for a period of two (2) years from the date of original purchase. Generators used for commercial or for rental have a warranty period of 90 days from date of original purchase. Please fill out the enclosed warranty card and mail it to Power Pro Technology along with a copy of the receipt. The information is required to process warranty claims.

PowerPro Technology™ will repair or replace, at its discretion, any part that is proven to be defective in materials or workmanship under normal use during the two (2) year warranty period. Warranty repairs or replacements will be made without charge for parts or labor. Parts replaced during warranty repairs will be considered as part of the original product and will have the same warranty period as the original product.

TO EXERCISE WARRANTY COVERAGE:

Do not return to retailer! For warranty and technical support call the toll-free Customer Service Number: (800) 232-1195 and you will be informed of the nearest authorized service center. We will prearrange the repair with the center.

WARRANTY COVERAGE:

This warranty is conveyed to the original purchaser and is not transferable.
Generators contain parts that will wear out with usage and parts that need maintenance. The warranty does not cover wear or maintenance parts. Specifically, the warranty does not cover replacement of air filter, spark plug, brush and recoil starter rope.
Warranty does not extend to generators damaged or affected by accidents, neglect, misuse, contaminated fuel, unauthorized alterations, use in applications beyond product design and any other modification or abuse.

PowerPro Technology™ is not liable for any indirect, incidental or consequential damages from the sale or use of this product. Any implied warranties are limited to two (2) years as stated in this written limited warranty. Some states do not allow limitation on the length of an implied warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you the specific legal right, and you may have other rights that vary by state.