

Power max

Inverter
Trade
Series

GENERATOR

4200W

INVERTER GENERATOR

15L
FUEL
TANK

UP TO
10 hrs
AT 50%
LOAD

2x
230V
AC POWER
OUTLETS

XPG4200Ei



XPG4200Ei

OPERATING MANUAL

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Introduction

Your new POWERMAX Generator will more than satisfy your expectations. It has been manufactured under stringent quality standards to meet superior performance criteria. You will find your new tool easy and safe to operate, and, with proper care, it will give you many years of dependable service.

Carefully read through this entire Instruction Manual before using your new POWERMAX Generator. Take special care to heed the cautions and warnings.

Your generator has many features that will make your job faster and easier. Safety, performance, and dependability have been given top priority in the development of this tool, making it easy to maintain and operate.

Environmental Protection

Recycle unwanted materials instead of disposing of them as waste. All tools, hoses and packaging should be sorted, taken to the local recycling centre and disposed of in an environmentally safe way.



Scope Of Product

This product is suited for home, camping and emergency power applications. It will operate most powertools, appliances and lighting.

Description Of Symbols

The rating plate on your tool may show symbols. These represent important information about the product or instructions on its use.



Wear hearing protection.
Wear eye protection.
Wear breathing protection.



Conforms to relevant standards for electromagnetic compatibility.

Specifications

AC Output:	230V AC ~ 50Hz
Rated Power:	3800W
Peak Power:	4200W
Phase:	Single
Power Factor:	COS Ø = 1
Displacement:	223cc
Engine:	7HP, 4 stroke
RPM:	3700 RPM
Fuel Tank Capacity:	15L
Fuel Type:	Unleaded petrol
Oil Type:	SAE30 4 Stroke
Operation Noise Level:	72dBA
Net Weight:	40kg

Safety Instructions for Power Tools

To use this tool properly, you must observe the safety regulations, the assembly instructions and the operating instructions to be found in this Manual. All persons who use and service the machine have to be acquainted with this Manual and must be informed about its potential hazards. Children and infirm people must not use this tool. Children should be supervised at all times if they are in the area in which the tool is being used. It is also imperative that you observe the accident prevention regulations in force in your area. The same applies for general rules of occupational health and safety.



WARNING:

When using power tools, basic safety precautions should always be taken to reduce the risk of fire, electric shock and personal injury. Also, please read and heed the advice given in the additional important safety instructions.

- 1. Keep the work area clean and tidy.** Cluttered work areas and benches invite accidents and injury.
- 2. Consider the environment in which you are working.** Do not use power tools in damp or wet locations. Keep the work area well lit. Do not expose power tools to rain. Do not use power tools in the presence of flammable liquids or gases.
- 3. Keep visitors away from the work area.** All visitors and onlookers, especially children and infirm persons, should be kept well away from where you are working. Do not let others in the vicinity make contact with the tool or extension cord.
- 4. Store tools safely.** When not in use, tools should be locked up out of reach.
- 5. Do not force the tool.** The tool will do the job better and safer working at the rate for which it was designed.
- 6. Use the correct tool for the job.** Do not force small tools or attachments to do the job best handled by a heavier duty tool. Never use a tool for a purpose for which it was not intended.

7. Dress correctly. Do not wear loose clothing or jewellery. They can be caught in moving parts. Rubber gloves and non-slip footwear are recommended when working outdoors. If you have long hair, wear a protective hair covering.

8. Use safety accessories. Safety glasses and earmuffs should always be worn. A face or dust mask is also required if the drilling operation creates dust.

9. Secure the work piece. Use clamps or a vice to hold the work piece. It is safer than using your hand and frees both hands to operate the tool.

10. Do not overreach. Keep your footing secure and balanced at all times.

11. Look after your tools. Keep tools sharp and clean for better and safer performance. Follow the instructions regarding lubrication and accessory changes. Inspect tool cords periodically and, if damaged, have them repaired by an authorised service facility. Inspect extension cords periodically and replace them if damaged. Keep tool handles dry, clean and free from oil and grease.

12. Remove adjusting keys and wrenches. Check to see that keys and adjusting wrenches are removed from the tool before switching on.

13. Stay alert. Watch what you are doing. Use common sense. Do not operate a tool when you are tired.

14. Check for damaged parts. Before using a tool, check that there are no damaged parts. If a part is slightly damaged, carefully determine if it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, proper mounting and any other conditions that may affect the operation of the tool. A part that is damaged should be properly repaired or replaced by an authorised service facility, unless otherwise indicated in this Instruction Manual.

15. Use only approved parts. When servicing, use only identical replacement parts. Use an authorised service facility to fit replacement parts.



WARNING:

The use of an accessory or attachment, other than those recommended in this Instruction Manual, may present a risk of personal injury.

Save these important safety instructions

Risk of electrocution and fire		
Hazard	What could happen	How to prevent it
Improper storage of extension cord.	Extension cord can come into contact with hot engine parts resulting in damage. Using a damaged extension cord can result in electrocution or death.	Remove extension cord from the generator and store separately away from generator.
Operation of generator in rain, wet, icy, or flooded conditions.	Water is an excellent conductor of electricity! Water which comes in contact with electrically charged components can transmit electricity to the frame and other surfaces, resulting in electrical shock to anyone contacting them.	Operate generator in a clean, dry, well ventilated area. Make sure hands are dry before touching unit.
Placing generator on or against highly conductive surface, such as a steel walkway or metal roof.	Accidental leakage of electrical current could charge conductive surfaces in contact with the generator.	Place generator on low conductivity surface such as a concrete slab. ALWAYS operate generator a minimum of 2 meters from any conductive surface.
Use of worn, damaged or ungrounded extension cords.	Contact with worn or damaged extension cords could result in electrocution. Use of ungrounded cordsets could prevent operation of circuit breakers and result in electrical shock.	Inspect extension cords before use and replace with new cord if required. Always use a cordset having a grounding wire with an appropriate grounding plug. DO NOT use an ungrounded plug.
Operation of unit when damaged, or with guards or panels removed.	Attempting to use the unit when it has been damaged, or when it is not functioning normally could result in fire or electrocution. Removal of guarding could expose electrically charged components and result in electrocution.	Do not operate generator with mechanical or electrical problem. Have unit repaired by an Authorized Service Centre. Do not operate generator with protective guarding removed.

Risk of fire		
Hazard	What could happen	How to prevent it
Attempting to fill the fuel tank while the engine is running.	Fuel and fuel vapours can become ignited by coming in contact with hot components such as the muffler, engine exhaust gases, or from an electrical spark.	Turn engine off and allow it to cool before adding fuel to the tank. Equip area of operation with a fire extinguisher certified to handle gasoline or fuel fires.
Sparks, fire, hot objects	Cigarettes, sparks, fires, or other hot objects can cause fuel or fuel vapours to ignite.	Add fuel to tank in well ventilated area. Make sure there are no sources of ignition near the generator.
Improper storage of fuel	Improperly stored fuel could lead to accidental ignition. Fuel improperly secured could get into the hands of children or other unqualified persons.	Store fuel in an approved container designed to hold fuel. Store container in secure location to prevent use by others.
Tampering with factory set engine speed settings.	Engine speed has been factory set to provide safe operation. Tampering with the engine speed adjustment could result in overheating of attachments and could cause a fire.	Never attempt to "speed-up" the engine to obtain more performance. Both the output voltage and frequency will be thrown out of standard by this practice, endangering attachments and the user.
Inadequate ventilation for generator	Materials placed against or near the generator or operating the generator in areas where the temperature exceeds 40° C ambient (such as storage rooms or garages) can interfere with its proper ventilation features causing overheating and possible ignition of the materials or buildings.	Operate generator in a clean, dry, well ventilated area. DO NOT OPERATE UNIT INDOORS OR IN ANY CONFINED AREA.

Overfilling the fuel tank – fuel spillage.	Spilled fuel and its vapours can become ignited from hot surfaces or sparks.	Use care in filling the tank to avoid spilling fuel. Make sure fuel cap is secured tightly and check engine for fuel leaks before starting engine. Move generator away from refuelling area or any spillage before starting engine. Allow for fuel expansion. Never refuel with the engine running.
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Risk of injury and property damage when transporting generator

Hazard	What could happen	How to prevent it
Fire, Inhalation, Damage to Vehicle Surfaces	Fuel or oil can leak or spill and could result in fire or breathing hazard, serious injury or death can result. Fuel or oil leaks can damage carpet, paint or other surfaces in vehicles or trailers.	The generator is equipped with a fuel tap, turn the lever of this valve to the off position before transporting to avoid fuel leaks. Transport fuel only in an approved fuel container. Always place generator on a protective mat when transporting to protect against damage to vehicle from leaks. Remove generator from vehicle immediately upon arrival at your destination.

Risk of breathing - inhalation hazard

Hazard	What could happen	How to prevent it
Gasoline engines produce toxic carbon monoxide exhaust fumes.	Breathing exhaust fumes will cause serious injury or death.	Operate generator in clean, dry, well ventilated area. Never operate unit in enclosed areas such as garages, basements, storage, sheds, or in any location occupied by humans or animals. Keep children, pets and others away from area of operating unit.

Risk of unsafe operation

Hazard	What could happen	How to prevent it
Operation of generator in careless manner.	All sources of energy include the potential for injury. Unsafe operation or maintenance of your generator could lead to serious injury or death to you or others.	<ul style="list-style-type: none"> • Review and understand all of the operating instructions and warnings in this manual. • Become familiar with the operation and controls of the generator. Know how to shut it off quickly. • Equip area of operation with a fire extinguisher certified to handle gasoline or fuel fires. • Keep children or others away from the generator at all times.
Operating generator while suspended	Generator will not operate properly and will cause damage to the generator and could cause serious injury or death to you or others.	Never operate generator while suspended or in an unlevel position. Always operate generator on a flat, level surface.

Risk of hot surfaces		
Hazard	What could happen	How to prevent it
Contact with hot engine and generator components.	Contact with hot surfaces, such as engines exhaust components, could result in serious burns.	During operation, touch only the control surfaces of the generator. Keep children away from the generator at all times. They may not be able to recognize the hazards of this product.

Risk of moving parts		
Hazard	What could happen	How to prevent it
Contact with moving parts can result in serious injury.	The generator contains parts which rotate at high speed during operation. These parts are covered by guarding to prevent injury.	Never operate generator with guarding or cover plates removed. Avoid wearing loose fitting clothing or jewellery which could be caught by moving parts.

Risk from lifting		
Hazard	What could happen	How to prevent it
Lifting a very heavy object.	Serious injury can result from attempting to lift too heavy an object.	When lifting, always keep the object you are lifting near the vertical axis of your body. DO NOT use you back to lift heavy loads. Both people should crouch down, grab the underside of unit and use your legs to carry the weight. Keep the object as near the centre of your body's gravity as possible. Avoid twisting your bodies when carrying the unit; instead, turn your whole body using your feet.

1. Do not operate in a hazardous location. Such areas include where there is a risk of explosion of petrol fumes, leaking gas or explosive dust.

2. Do not operate in a confined area. Exhaust gases, smoke or fumes could reach dangerous concentrations.

3. The output of this generator is potentially lethal. The generator should not be connected to a fixed electrical installation except by an appropriately licensed person.

4. Protect your generator. This generator is NOT WEATHERPROOF and should not be exposed to direct sunlight, high ambient temperature and damp, wet or high humidity conditions.

5. Do not smoke while refuelling. This is potentially dangerous as it may ignite the fuel and cause an explosion.

6. Take care not to spill fuel. When refuelling the generator ensure that the engine has been switched off. Prevent the spilling of fuel as this may also ignite with the hot engine. Never refuel whilst the engine running.

7. Be careful where you store the generator. Store the generator in a dry area away from inflammable liquids.

8. Keep your distance. The generator emits exhaust fumes. As a safety precaution do not stand close to the unit whilst it is in operation. Ensure bystanders also keep their distance.

9. Never fill fuel tank indoors. Never fill fuel tank when engine is running or hot. Do not smoke when filling fuel tank.

10. Engine speed has been factory set to provide safe operation. Tampering with the engine speed adjustment could result in overheating of attachments and could cause a fire. Never attempt to “speed-up” the engine to obtain more performance. Both the output voltage and frequency will be thrown out of standard by this practice, endangering attachments and the user.

Know Your Product

1. Fuel Tank
2. Fuel Cap
3. Engine Switch
4. Eco Switch
5. USB Terminal
6. 17A Circuit Breaker
7. Digital Display
8. 15A Circuit Breakers
9. 230V AC Receptacles
10. Ground Terminal
11. Oil Warning Indicator Light
12. Overload Indicator Light
13. Output Indicator Light
14. Recoil Starter
15. Oil Drain Bolt
16. Dipstick



Approximate Wattage Requirements

IMPORTANT: Always check that the combined load of your appliances does not exceed the rated output of your generator. Always select a generator that has more capacity than your load requirements. The small amount extra you may invest to do this will be quickly recovered with the fuel saving and longer service life gained by not having to constantly run your generator at full load.

This chart lists average power requirements. Your particular tool or appliance may require more or less than the listed wattage.

* Where START wattage is the same as RUN wattage, this signifies no additional power is required for starting.

APPLIANCES / TOOLS	APPROX. RUN (W)	APPROX. START (W)	APPLIANCES / TOOLS	APPROX. RUN (W)	APPROX. START (W)
Microwave 750W	750	1200	Central Air Conditioner:		
Coffee Maker	1750	1750	10,000 BTU	1500	2200
Electric Clothes Drier	5750	5750	24,000 BTU	3800	5000
Washing Machine	1150	2300	32,000 BTU	5000	6500
Refrigerator	700	2200	Room Air Conditioner:		
Lights	100	100	10,000 BTU	1500	2200
Colour Television	350	350	Circular Saw 7 1/4"	1400	2300
Electric Frypan	1500	1500	Chainsaw 2HP	1100	2500
Dehumidifier	400	400	Portable Air Compressor	1200	3600
Computer - Desktop	700	700	Hand Drill 1/2"	600	600
VCR	50	50	Drill 1/2"	600	900
Dishwasher - Cool Dry	700	1400	Battery Charger 15 amp	500	700
- Hot Dry	1450	2000	Electric Welder 200 amp AC	9000	9000
Toaster - 2 Slice	1250	1250	Jigsaw	300	400
- 4 Slice	1600	1600	Electric Weed Trimmer	500	650
Freezer	2200	2500	Router	1000	1300
Hair Dryer	800-1700	800-1700	Belt Sander	1000	1300
Steam Iron	1800	1800	Table Saw 10"	1750	4250
Garage Door Opener - 1/4 HP	550	1100	Bench Grinder	1400	2450
- 1/3 HP	725	1400	Concrete Mixer 3.5c/f	1900	2500
Radio	200	200	Band Saw	1100	1350
Blender	375	500	Power Drill - Medium	1000	1200
Sump Pump 1/2 HP	1050	2150	- Heavy Duty	1500	1800
Well Pump 1/2 HP	1000	2100	Angle Grinder - 100mm	1000	1200
Household Water Pump	1200	2700	- 230mm	2400	2700

Preparing the Generator

It is important to check the generator before you commence operating the unit.

⚠ IMPORTANT!

Ensure that the engine has oil. When leaving the factory this generator has **NO OIL** in the engine. The generator will not start if the generator has no oil.

Connecting the Battery

1. The Red (+) Connector should be attached to the battery first.
2. Remove the screw from the battery terminal.
3. Place screw through the eyelet and tighten screw.
4. Install the Red protection boot.
5. Repeat these steps for the Black (-) Terminal.

Adding Engine Oil

⚠ CAUTION!

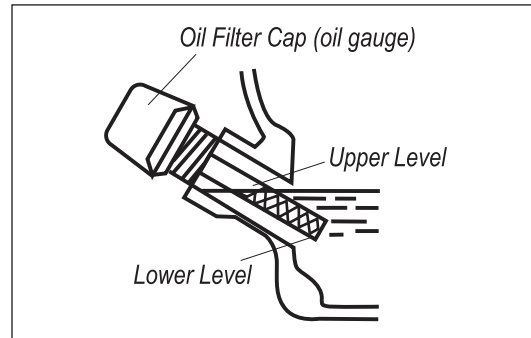
DO NOT attempt to crank or start the engine before it has been properly filled with the recommended type and amount of oil. Damage to the generator as a result of failure to follow these instructions will void your warranty.

NOTE: The generator rotor has a sealed, pre-lubricated ball bearing that requires no additional lubrication for the life of the bearing.

Recommended oil: 10W-30 automotive oil.

Oil capacity is up to 600ml.

1. Before checking or refilling oil, be sure the generator is put on a stable and level surface, ensuring the engine has been switched OFF.
2. Remove oil fill cap/dipstick to add oil.
3. Add up to 600ml of oil (not included) and replace oil fill cap/dipstick. **DO NOT OVERFILL.**
4. Check engine oil level each time generator is used and add as needed.

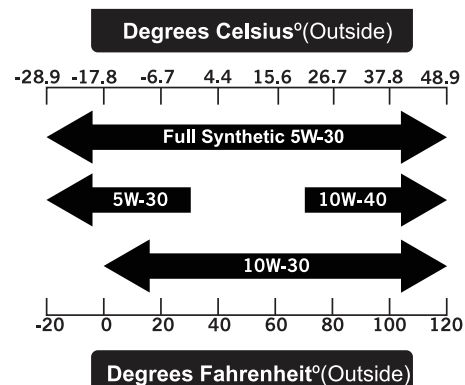


NOTE: Once oil has been added, a visual check should show oil about 1-2 threads from running out of the fill hole. If using the dipstick to check oil level, **DO NOT** screw in the dipstick while checking.

⚠ CAUTION!

The engine is equipped with a low oil shut-off and will stop when the oil level in the crankcase falls below the threshold level.

Check oil often during the break-in period. Refer to the Maintenance section for recommended service intervals. We consider the first 5 hours of run time to be the break-in period for the unit. During the break in period stay at or below 50% of the running watt rating and vary the load occasionally to allow stator windings to heat and cool. Adjusting the load will also cause engine speed to vary and help seat piston rings. After the 5 hour break-in period, change the oil.



NOTE: Weather will affect engine oil and engine performance. Change the type of engine oil used based on weather conditions to suit the engine needs.

NOTE: Synthetic oil may be used after the 5 hour initial break-in period. Using synthetic oil does not increase the recommended oil change interval.

Adding Fuel

1. Use clean, fresh, regular unleaded fuel with a minimum octane rating of 85 and an ethanol content of less than 10% by volume.
2. DO NOT mix oil with fuel.
3. Clean the area around the fuel cap.
4. Remove the fuel cap.
5. Slowly add fuel to the tank. DO NOT OVERFILL. Fuel can expand after filling. A minimum of 1/4 in. (6.4 mm) of space left in the tank is required for fuel expansion, more than 1/4 in. (6.4 mm) is recommended. Fuel can be forced out of the tank as a result of expansion if it is overfilled, and can affect the stable running condition of the product. When filling the tank, it is recommended to leave enough space for the fuel to expand.
6. Screw on the fuel cap and wipe away any spilled fuel.

CAUTION!:

Use regular unleaded gasoline with a minimum octane rating of 85. DO NOT mix oil and gasoline. Fill tank to approx. 6.4 mm below the top of the tank to allow for fuel expansion.

DO NOT pump gas directly into the generator at the gas station. Use an approved container to transfer the fuel to the generator.

DO NOT fill fuel tank indoors.

DO NOT fill fuel tank while engine is running or hot.

DO NOT overfill the fuel tank.

DO NOT light cigarettes or smoke when filling the fuel tank.

WARNING!

Pouring fuel too fast through the fuel screen may result in blow back of fuel at the operator while filling.

NOTE: Our engines work well with 10% or less ethanol blend fuels. When using blended fuels there are some issues worth noting:

- Ethanol-gasoline blends can absorb more water than gasoline alone.
- These blends can eventually separate, leaving water or a watery goo in the tank, fuel valve and carburetor.
- With gravity-fed fuel supplies, this compromised fuel can be drawn into the carburetor and cause damage to the engine and/or potential hazards.
- There are only a few suppliers of fuel stabilizer that are formulated to work with ethanol blend fuels.
- Any damages or hazards caused by using improper fuel, improperly stored fuel, and/or improperly formulated stabilizers, are not covered by manufacturer warranty.

It is advisable to always shut off the fuel supply, run the engine to fuel starvation and drain the tank when the equipment is not in use for more than 30 days.

Grounding

Your generator must be properly connected to an appropriate ground to help prevent electric shock. A ground terminal connected to the frame of the generator has been provided on the power panel. For remote grounding, connect a length of heavy gauge (12 AWG minimum) copper wire between the generator ground terminal and a copper rod driven into the ground. We strongly recommend that you consult with a qualified electrician to ensure compliance with local electrical codes.

WARNING!

Failure to properly ground the generator can result in electric shock.

Generator Location

NEVER operate the generator inside any building, including garages, basements, crawlspaces and sheds, enclosure or compartment, including the generator compartment of a recreational vehicle. Please consult your local authority. In some areas, generators must be registered with the local utility. Generators used at construction sites may be subject to additional rules and regulations.

Generators should be on a flat, level surface at all times (even while not in operation). Generators must have at least 5 ft. (1.5 m) of clearance from all combustible material. In addition to clearance from all combustible material, generators must also have at least 3 ft. (9.14m) of clearance on all sides to allow for adequate cooling, maintenance and servicing.

Generators should never be started or operated in the back of a SUV, camper, trailer, in the bed of a truck (regular, flat or otherwise), under staircases/stairwells, next to walls or buildings, or in any other location that will not allow for adequate cooling of the generator and/or the muffler.

DO NOT contain generators during operation. Allow generators to properly cool before transport or storage. Place the generator in a well-ventilated area. DO NOT place the generator near vents or intakes where exhaust fumes could be drawn into occupied or confined spaces. Carefully consider wind and air currents when positioning generator.

⚠ CAUTION!

Failure to follow proper safety precautions may void manufacturer's warranty.

⚠ WARNING!

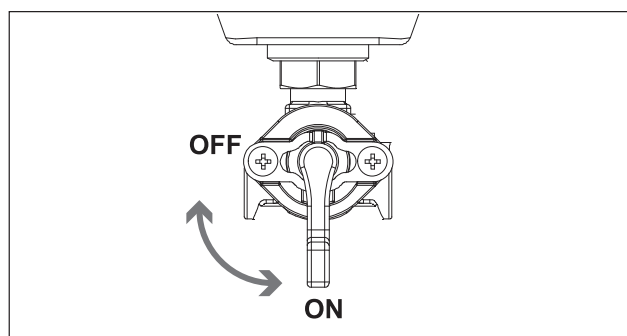
Do not operate or store the generator in rain, snow, or wet weather. Using a generator or electrical appliance in wet conditions, such as rain or snow, or near a pool or sprinkler system, or when your hands are wet, could result in electrocution.

⚠ WARNING!

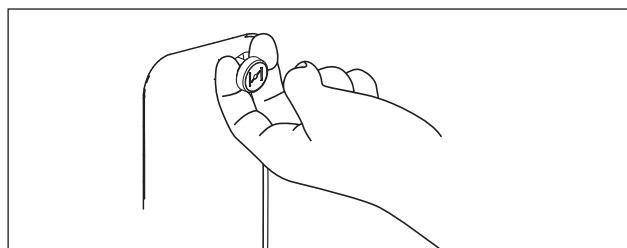
During operation the muffler and exhaust fumes produced will become hot. If adequate cooling and breathing space are not supplied, or if the generator is blocked or contained, temperatures can become extremely heated and may lead to fire.

Starting the Engine

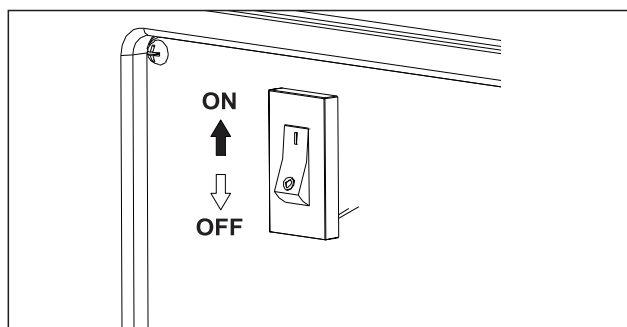
1. Make certain the generator is on a flat, level surface.
2. Disconnect all electrical loads from the generator. Never start or stop the generator with electrical devices plugged in or turned on.
3. Turn the fuel valve to the "ON" position.



4. Pull choke lever out to the "Start" position.



5. Turn the engine switch to the "ON" position.



6. Pull the starter cord slowly until resistance is felt and then pull rapidly.
7. Once engine is running and warms up, push the choke lever in to the "RUN" position.

NOTE: Keep choke in "CHOKE" position for only one pull of the recoil starter. After first pull, push choke in for up to the next 3 pulls of the recoil starter. Too much choke leads to sparkplug fouling/engine flooding due to the lack of incoming air. This will cause the engine to not start.

NOTE: If the engine starts but does not continue to run make certain that the generator is on a flat, level surface. The engine is equipped with a low oil sensor that will prevent the engine from running when the oil level falls below a critical threshold.

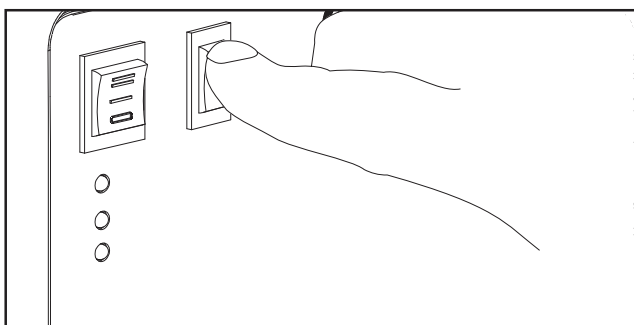
Economy Switch

The economy switch can be activated in order to minimize fuel consumption and noise while operating the unit during times of reduced electrical output, allowing the engine speed to idle during periods of non-use. The engine speed automatically returns to normal when an electrical load is connected. When the smart switch is off, the engine runs at normal operating speed.



WARNING!

For periods of high electrical load or momentary fluctuations, the economy switch should be turned OFF.



Connecting Electrical Loads

1. Let the engine stabilize and warm up for a few minutes after starting
2. Plug in and turn on the desired 230V AC single phase, 50 Hz electrical loads.
 - DO NOT connect 3-phase loads to the generator.
 - DO NOT connect 60 Hz loads to the generator.
 - DO NOT overload the generator.

NOTE: Connecting a generator to your electric utility company's power lines or to another power source may be against the law. In addition this action, if done incorrectly, could damage your generator and appliances and could cause serious injury or even death to you or a utility worker who may be working on nearby power lines.

If you plan to run a portable electric generator during an outage, please notify your electric utility company immediately and remember to plug your appliances directly into the generator. Do not plug the generator into any electric outlet in your home. Doing so could create a connection to the utility company power lines. You are responsible for ensuring that your generator's electricity does not feed back into the electric utility power lines.

If the generator will be connected to a building electrical system, consult your local utility company or a qualified electrician. Connections must isolate generator power from utility power and must comply with all applicable laws and codes.

12V DC Outlet

The 12V DC outlet can be used with the supplied charge cable and USB charger and other commercially available 12V DC automotive style plugs. The DC output is unregulated and can damage some products. Confirm your accessory input voltage range is at least 12-24V DC. When using the DC outlet turn the ECO switch to the "OFF" position.

⚠ WARNING!

Do not operate a device while it is plugged into the 12V DC outlet. Prolonged exposure to engine exhaust can cause injury or death.

⚠ WARNING!

While charging a device do not place on the exhaust side of the generator. Extreme heat caused by exhaust can damage the device and cause a potential fire hazard.

Stopping the Engine

1. Turn off and unplug all electrical loads. Never start or stop the generator with electrical devices plugged in or turned on.
2. Let the generator run at no-load for several minutes to stabilize internal temperatures of the engine and generator.
3. Turn the fuel valve to the "OFF" position.
4. Let the engine run until fuel starvation has stopped the engine. This usually takes a few minutes.
5. Turn the engine switch to the "OFF" position.

⚠ CAUTION:

Always ensure that the fuel valve and the engine switch are in the "OFF" position when the engine is not in use.

NOTE: If the engine will not be used for a period of two weeks or longer, please see the storage section for proper engine and fuel storage later in this manual.

Avoiding Overload

Capacity

NOTE: See page 9 for examples of approximate wattage requirements.

Follow these simple steps to calculate the running and starting watts necessary for your purposes.

1. Select the electrical devices you plan on running at the same time.
2. Total the running watts of these items. This is the amount of power you need to keep your items running.
3. Identify the highest starting wattage of all devices identified in step 1. Add this number to the number calculated in step 2.

Surge wattage is the extra burst of power needed to start some electric driven equipment. Following the steps listed under "Power Management" in the following section will guarantee that only one device will be starting at a time.

Power Management

Use the following formula to convert voltage and amperage to watts:

$$\text{Volts} \times \text{Amps} = \text{Watts}$$

To prolong the life of your generator and attached devices, follow these steps to add electrical load:

1. Start the generator with no electrical load attached.
2. Allow the engine to run for several minutes to stabilize.
3. Plug in and turn on the first item. It is best to attach the item with the largest load first.
4. Allow the engine to stabilize.
5. Plug in and turn on the next item.
6. Allow the engine to stabilize.
7. Repeat steps 5-6 for each additional item.

NOTE: Never exceed the specified capacity when adding loads to the generator.

Overload Operation

The overload indicator light will turn on when the rated load is exceeded. When the maximum load is reached, The LED will blink and cut power to the receptacles. To recover the power, shut down the generator, wait until the light turns off and restart the generator.

Operation at High Altitude

The density of air at high altitude is lower than at sea level. Engine power is reduced as the air mass and air/fuel ratio decrease. Engine power and generator output will be reduced approximately 3½% for every 1000 feet of elevation above sea level. This is a natural trend and cannot be changed by adjusting the engine.

At high altitudes increased exhaust emissions can also result due to the increased enrichment of the air fuel ratio. Other high altitude issues can include hard starting, increased fuel consumption and spark plug fouling.

Generator Maintenance

The owner/operator is responsible for all periodic maintenance.



WARNING!

Never operate a damaged or defective generator. Tampering with the factory set governor will void your warranty.



WARNING!

Improper maintenance will void your warranty.

NOTE: Maintenance, replacement, or repair of emission control devices and systems may be performed by any non-road engine repair establishment or individual. For service or parts assistance, contact our help line.

Complete all scheduled maintenance in a timely manner. Correct any issue before operating the generator.

Engine Maintenance

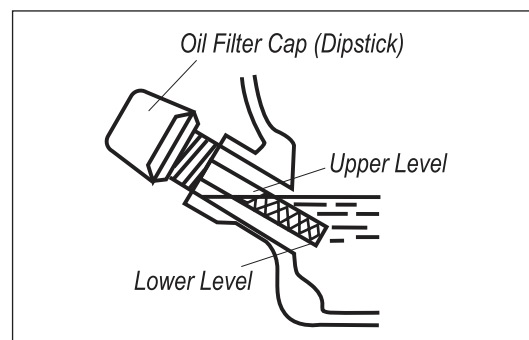
To prevent accidental starting, remove and ground sparkplug wire before performing any service.

Oil

Change oil when the engine is warm. Refer to the oil specification to select the proper grade of oil for your operating environment.

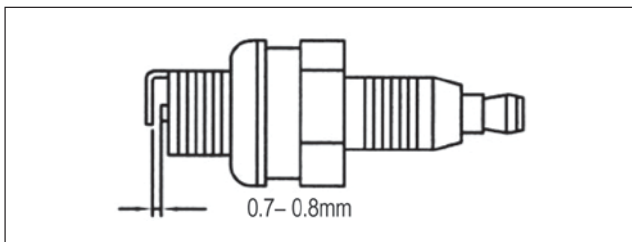
1. Remove the oil drain plug
2. Allow the oil to drain completely.
3. Replace the drain plug.
4. Remove oil fill cap/dipstick to add oil.
5. Add up to 0.6 qt. (0.6 L) of oil and replace oil fill cap/dipstick. **DO NOT OVERFILL.**
6. Dispose of used oil at an approved waste management facility.

NOTE: Once oil has been added, a visual check should show oil about 1-2 threads from running out of the fill hole. If using the dipstick to check oil level, **DO NOT** screw in the dipstick while checking.



Spark Plugs (Type: F6RTC)

1. Remove the spark plug cable from the spark plug.
2. Use a spark plug socket tool, or a 13/16 in. or 21 mm socket (not included) to remove the plug.
3. Inspect electrode on the plug. It must be clean and not worn to produce spark required for ignition.
4. Make certain the spark plug gap is 0.7 - 0.8 mm or (0.028 - 0.031 in.).
5. Refer to the spark plug recommendation chart when replacing the plug.
6. Carefully thread the plug into the engine.
7. Use the spark plug socket tool or a 13/16 in. or 21 mm socket (not included) to firmly install plug.
8. Attach the spark plug wire to the plug.



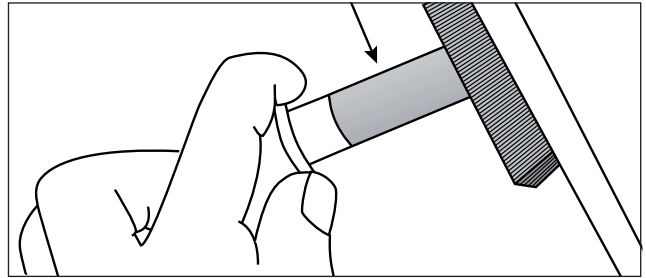
Air Filter

1. Remove the snap-on cover holding the air filter to the assembly.
2. Remove the foam element.
3. Wash in liquid detergent and water. Squeeze thoroughly dry in a clean cloth.
4. Saturate in clean engine oil.
5. Squeeze in a clean, absorbent cloth to remove all excess oil.
6. Place the filter in the assembly.
7. Reattach the air filter cover and snap in place.

Spark Arrester

1. Allow the engine to cool completely before servicing the spark arrester.
2. Remove the two screws holding the cover plate which retains the end of the spark arrester to the muffler.

3. Remove the spark arrester screen.
4. Carefully remove the carbon deposits from the spark arrester screen with a wire brush.
5. Replace the spark arrester if it is damaged.
6. Position the spark arrester in the muffler and attach with the two screws.



⚠ CAUTION!

Failure to clean the spark arrester will result in degraded engine performance.

Maintenance Schedule

Follow the service intervals indicated in the following maintenance schedule. Service your generator more frequently when operating in adverse conditions.

Every 8 hours or daily
Check oil level
Clean around air intake and muffler
First 5 Hours
Change oil
Every 50 hours or every season
Clean air filter
Change oil if operating under heavy load or in hot environments
Every 100 hours or every season
Change oil
Clean/Adjust spark plug
Check/Adjust valve clearance*
Clean spark arrester
Clean fuel tank and filter*
Every 250 hours
Clean combustion chamber
Every 3 years
Replace fuel line

Cleaning

Ensure that the generator is kept clean and stored properly. Only operate the unit on a flat, level surface in a clean, dry operating environment. DO NOT expose the unit to extreme conditions, excessive dust, dirt, moisture or corrosive vapors.



CAUTION!

DO NOT spray engine with water! Water can enter the generator through the cooling slots and damage the generator windings. It can also contaminate the fuel system.

Use a damp cloth to clean exterior surfaces of the generator, a soft bristle brush to remove dirt and oil and an air compressor (25 PSI) to clear dirt and debris.

Inspect all air vents and cooling slots to ensure that they are clean and unobstructed.

Repairs

Only an authorised service centre should repair the generator. See contact details for service under the warranty section.

Storage



WARNING!

Gasoline, gasoline vapors and liquid petroleum gas (LPG/propane) are highly flammable and extremely explosive.

Fire or explosion can cause severe burns or death. Only fill or drain fuel outdoors in a well-ventilated area. Do not pump gasoline directly into the generator. Use an approved container to transfer the fuel to the generator.

Never use a fuel container, hose, cylinder or any other fuel related item that is damaged or appears damaged. Do not overfill the fuel tank.



WARNING!

Always keep fuel away from sparks, open flames, pilot lights, heat and other sources of ignition. Do not light or smoke cigarettes.

Short Term Storage (up to 1 year)

Gasoline in the fuel tank has a maximum shelf life of up to 1 year with the addition of properly formulated fuel stabilizers and if stored in a cool, dry place. Gasoline in the carburetor, however, WILL gum up and clog the carburetor if it isn't used or drained within 2 weeks.

1. Be sure all appliances are disconnected from the generator.
2. Add a properly formulated fuel stabilizer to the tank
3. Run the generator for 10 minutes so the treated fuel cycles through the fuel system and carburetor.
4. With the generator running, turn the fuel valve to the "OFF" position and let the generator run until fuel starvation has stopped the engine. This usually takes a few minutes.
5. Turn engine switch to the "OFF" position.
6. Allow generator to cool completely before continuing.
7. **Optional:** to ensure fuel is completely drained from the carburetor, use the drain bolt on the carburetor to empty any excess gasoline into an appropriate container.
8. Remove the spark plug cap and spark plug and pour about a tablespoon of oil into the cylinder.
9. Pull the recoil slowly to crank the engine to
10. Reattach the spark plug and spark plug cap.
11. If the generator includes a battery, disconnect and
12. Clean the generator according to Generator Maintenance.
13. Store the generator in a cool, dry place out of direct sunlight.

Long Term Storage (over 1 year)

For storage over 1 year, the fuel tank and carburetor must be completely drained of gasoline.

1. Be sure all appliances are disconnected from the generator.
2. Add a properly formulated fuel stabilizer to the fuel tank.
3. Run the generator for 10 minutes so the treated fuel cycles through the fuel system and carburetor.
4. **Run Dry Option:**
 - a. Let the generator run till fuel is completely out
 - b. Turn engine switch to the "OFF" position.
 - c. Allow generator to cool completely.
5. **Drain Fuel Option:**
 - a. Turn engine switch to the "OFF" position.
 - b. Allow generator to cool completely.
 - c. Use the drain bolt on the carburetor to completely empty gasoline from the fuel tank and carburetor into an appropriate container.
 - d. Replace and tighten the carburetor drain bolt.
6. Turn the fuel valve to the "OFF" position.
7. Remove the spark plug and pour about a tablespoon of oil into the cylinder. Crank the engine slowly to distribute the oil and lubricate the cylinder.
8. Reattach the spark plug and spark plug cap.
9. If the generator includes a battery, disconnect and charge according to the 'Generator Battery' section of this manual.
10. Clean the generator according to the 'Generator Maintenance' section of this manual.
11. Store the generator in a cool, dry place out of direct sunlight.

Removing from Storage

If the generator has been improperly stored for a long period of time with gasoline in the fuel tank and/or carburetor, all fuel must be drained and the carburetor must be thoroughly cleaned. This process involves technically advanced tasks. For assistance please call our Technical Support line. If the fuel tank

and carburetor were properly emptied of all fuel prior to the generator being stored, follow the below steps when removing from storage.

1. Add fuel to the generator according to Add Fuel.
2. With the engine switch in the "OFF" position, turn the fuel valve to the "ON" position. After 5 minutes check the carburetor and air filter areas for any leaking gasoline. If found, the carburetor will need to be disassembled and cleaned or replaced. If no fuel leaks are found, turn the fuel valve to the "OFF" position.
3. Check oil level and add clean, fresh oil if needed.
4. Check and clear air filter of any obstructions such as bugs or cobwebs. If necessary, clean according to the 'Air Filter' section of this manual.
5. If the generator includes a battery, connect according to the 'Connect the Battery' section of this manual.
6. Start the generator according to the 'Starting the Engine' section of this manual.

NOTE: Our engines work well with 10% or less ethanol blend fuels. When using blended fuels there are some issues worth noting:

- Ethanol-gasoline blends can absorb more water than gasoline alone.
- These blends can eventually separate, leaving water or a watery goo in the tank, fuel valve and carburetor.
- With gravity-fed fuel supplies, this compromised fuel can be drawn into the carburetor and cause damage to the engine and/or potential hazards.
- There are only a few suppliers of fuel stabilizer that are formulated to work with ethanol blend fuels.
- Any damages or hazards caused by using improper fuel, improperly stored fuel, and/or improperly formulated stabilizers, are not covered by manufacturer warranty.



WARNING!

Generator exhaust contains odorless and colorless carbon monoxide gas. To avoid accidental or unintended ignition of your genera-

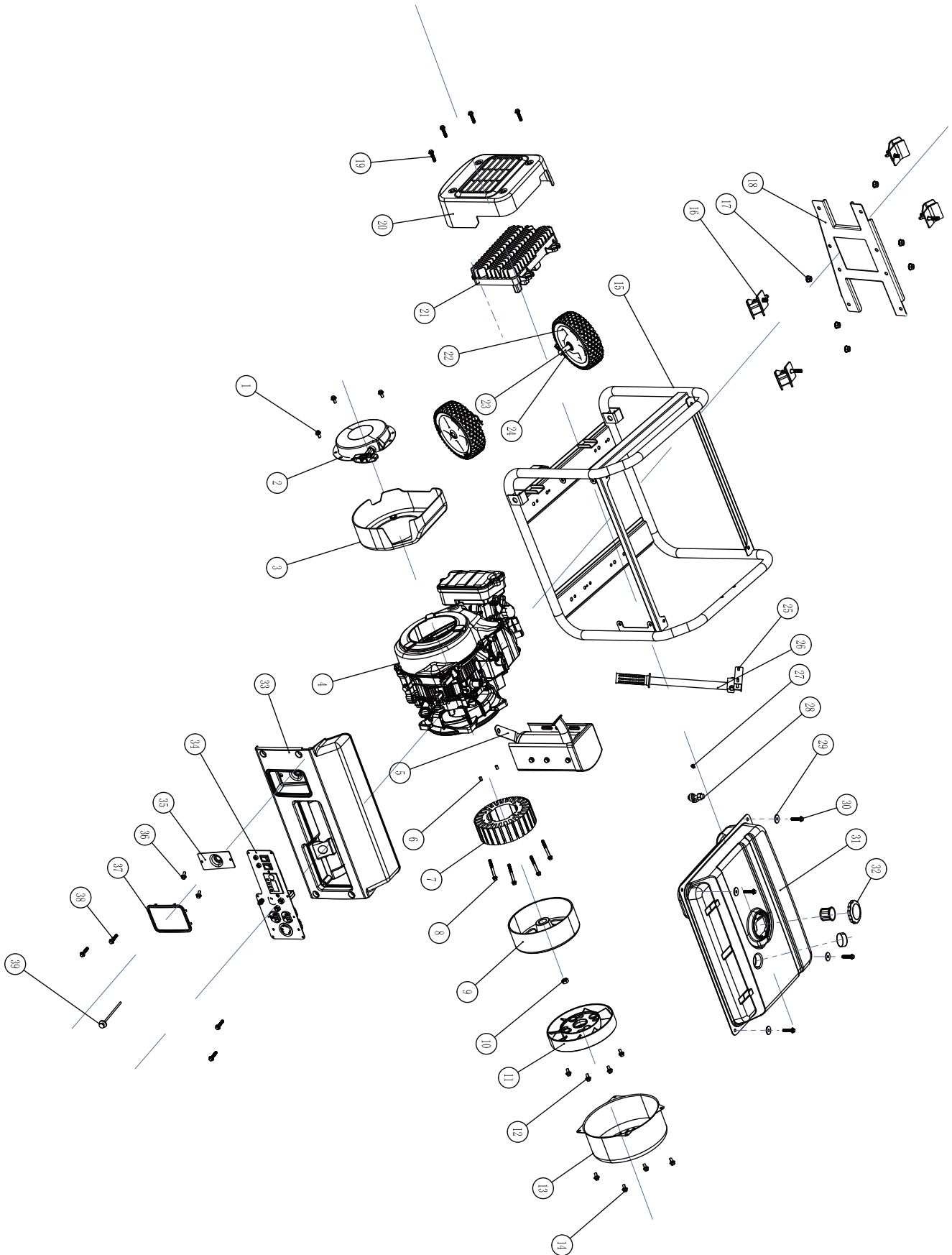
tor during periods of storage, the following precautions should be followed:

- *When storing the generator make sure the engine switch and fuel valve are set to the "OFF" position.*
- *If your generator includes a battery, disconnect according to the 'Generator Battery' section of this manual.*

An Important Message About Temperature

Your product is designed and rated for continuous operation at ambient temperatures up to 40°C. When your product is needed your product may be operated at temperatures ranging from -15°C to 50°C for short periods. If the product is exposed to temperatures outside this range during storage, it should be brought back within this range before operation. In any event, the product must always be operated outdoors, in a well ventilated area and away from doors, windows and other vents.

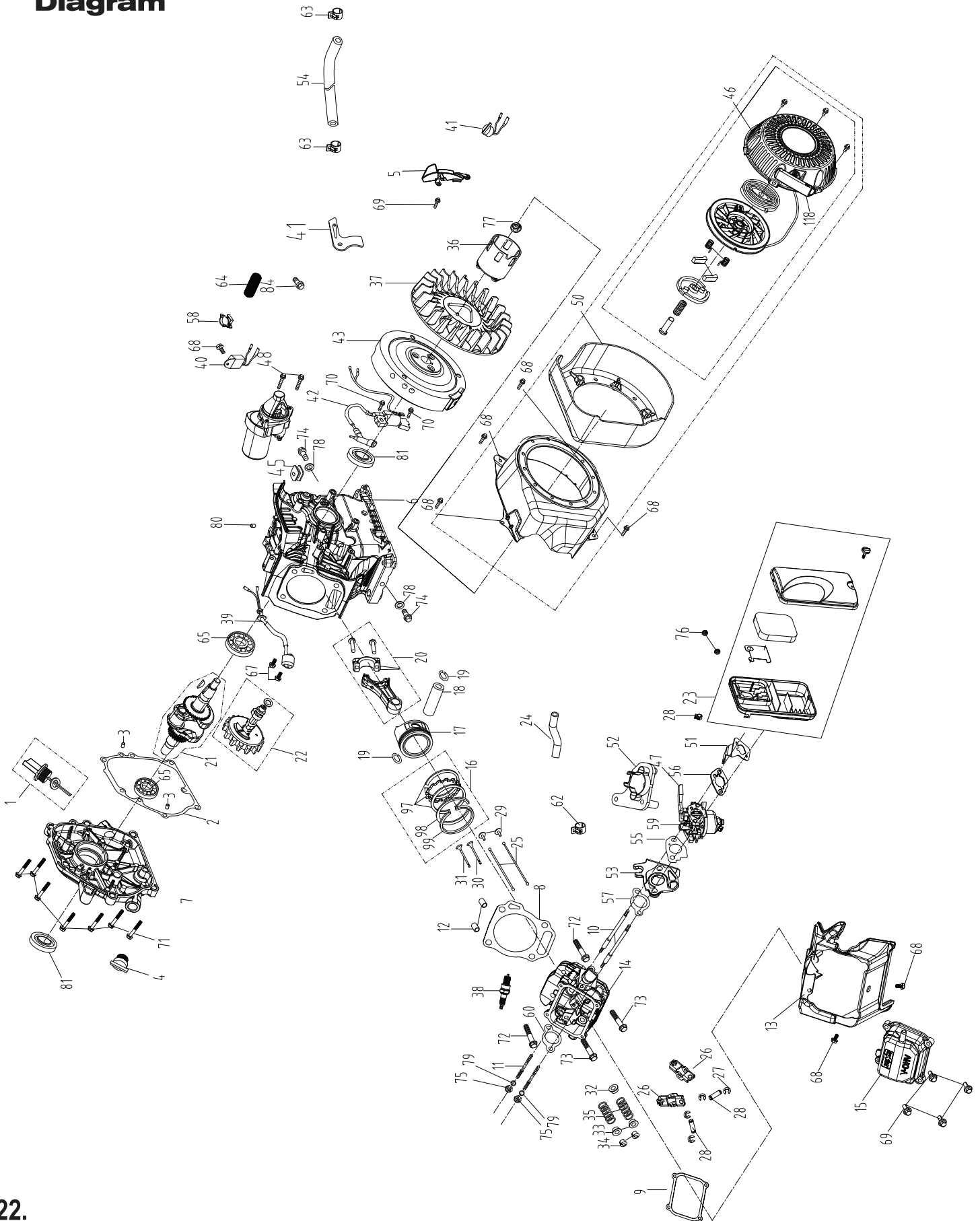
Parts Diagram



Parts List

Item	Description	Qty	Item	Description	Qty
1	Flange bolt	2	23	axle	2
2	recoil starter	1	24	lacing pin clips	2
3	inverter cover	1	25	fixed seat,handle bar	1
4	Engine	1	26	handle bar component	1
5	muffler	1	27	clamp	1
6	lacing pin	2	28	fuel tank switch	1
7	stator,inverter alternator	1	29	gasket,fuel tank	4
8	hexagon socket cap screws	4	30	hexagon bolt with flange	4
9	rotor,inverter alternator	1	31	fuel tank	1
10	hexagon nuts with flange	1	32	fuel tank cap	1
11	cooling fan	1	33	panel back cover	1
12	hexagon bolt with flange	4	34	control panel assembly	1
13	alternator end cover	1	35	handle fender	1
14	hexagon bolt with flange	4	36	hexagon bolt with flange	2
15	frame assembly	1	37	starting protection ring	1
16	shock absorbing mount	4	38	hexagon bolt with flange	6
17	hexagon nuts with flange	12	39	choke cable assembly	1
18	bottom board of engine	1			
19	hexagon bolt with flange	6			
20	inverter end cover	1			
21	inverter assembly	1			
22	wheels assy	2			

**Engine Parts
Diagram**

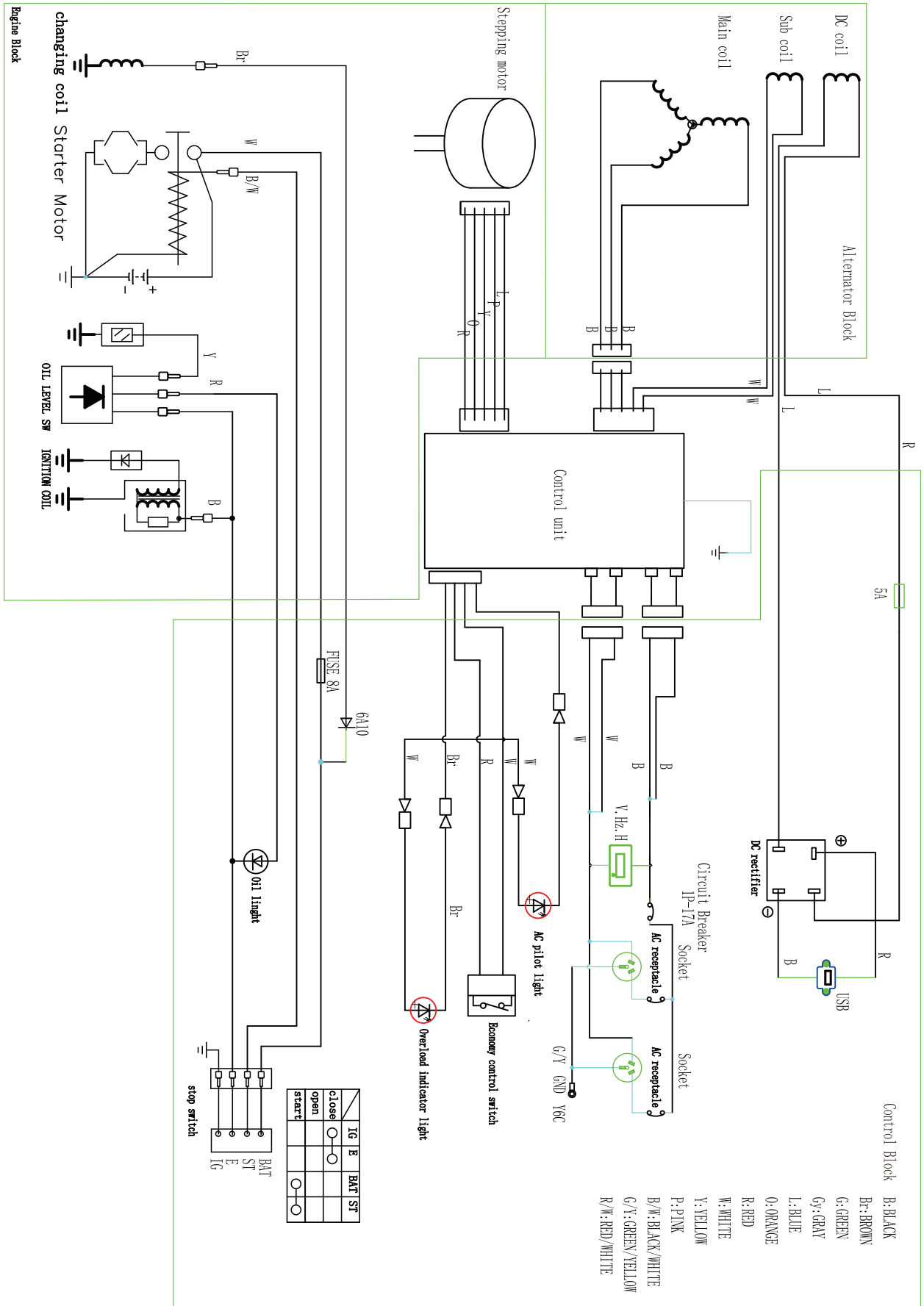


Engine Parts List

Item	Description	Qty
1	Dipstick	1
2	Crankcase covrer seal washer	1
3	Dowel pin	2
4	Oil plug	1
5	Shroud	1
6	Crankcase	1
7	Crankcase cover	1
8	Cylinder head seal washer	1
9	Cylinder cover seal washer	1
10	Bolt, stud, inlet	2
11	Bolt,stud,exhaust	2
12	Dowel pin	2
13	Shroud	1
14	Cylinder head assy	1
15	Cylinder cover assy	1
16	Ring set, piston	1
17	Piston	1
18	Pin, piston	1
19	Clip, piston pin	2
20	Connecting rod assy	1
21	Crankshaft assy	1
22	Camshaft assy	1
23	Air cleaner assy	1
24	Waste pipe	1
25	Push rod	2
26	Rocker arm	2
27	Clip, rocker shaft	4
28	Rocker shaft	2
29	Lifter, valve	2
30	Valve, intake	1
31	Valve, exhaust	1
32	Oil shield	1
33	Retainer, valve spring	2
34	Valve, lock	4
35	Spring, valve	2
36	Pulley, starter	1
37	Cooling fan	1
38	Spark plug	1
39	Engine oil sensor	1
40	Oil alert	1
41	Wire press plate	1
42	Coil assy, ignition	1
43	Flywheel comp	1
44	Cover comp, pan	1
45	Rubber stopper	1
46	Cover, recoil starter	1
47	Choke assembly	1

Item	Description	Qty
48	Starting motor	1
49	Pin, lock	2
50	Inner cover, inverter	1
51	Zip support, carburetor	1
52	Stepper motor support	1
53	Insulator, carburetor	1
54	Tube, fuel	1
55	Carburetor washer	1
56	Gasket, air cleaner	1
57	Gasket, air intake	1
58	Clip, check valve	1
59	Carburetor assy	1
60	Gasket, muffler	1
61	Mufler comp	1
62	Clip, tube	1
63	Clip, tube	1
64	Corrugated tube	1
65	Bearing	2
66	Fuel tank assy	1
67	Bolt, flange M6x16	2
68	Bolt, flange M6x12	9
69	Bolt, flange M6x20	5
70	Bolt, flange M6x25	2
71	Bolt, flange M8x32	7
72	Bolt, flange M8x50	2
73	Bolt, flange M8x70	2
74	Bolt, drain	2
75	Nut, hexagon M8	2
76	Bolt, flange M6	4
77	Bolt, flange M14x1.5	1
78	Aluminum washer	2
79	Spring washer	2
80	Plug	1
81	Oil seal 25x41.25x5	2

Wiring Diagram



Troubleshooting

Problem	Cause	Solution
Generator will not start	No fuel	Add fuel
	Faulty spark plug	Replace spark plug
	Unit loaded during start up	Remove load from unit
Generator will not start; Generator starts but runs roughly	Low oil level	Fill crankcase to the proper level Place generator on a flat, level surface
	Choke in the wrong position	Adjust choke
	Spark plug wire loose	Attach wire to spark plug
Generator shuts down during operation	Out of fuel	Fill fuel tank
	Low oil level	Fill crankcase to the proper level. Place generator on a flat, level surface
Generator cannot supply enough power or overheating	Generator is overloaded	Review load and adjust. See "Power Management"
	Insufficient ventilation	Check for air restriction. Move to a well ventilated area
No AC output	Cable not properly connected	Check all connections
	Connected device is defective	Replace defective device
	Circuit breaker is open	Reset circuit breaker
	Loose wiring	Inspect and tighten wiring connections
	Other	Contact the help line
Repeated circuit breaker tripping	Overload	Review load and adjust. See "Power Management"
	Faulty cords or device	Check for damaged, bare or frayed wires. Replace defective device

Warranty

As part of an on-going commitment to excellence in product support, Euroquip offers a comprehensive product warranty program.

1. THIS WARRANTY:

The benefits provided to the consumer in this warranty are in addition to other rights and remedies of a consumer under the New Zealand Consumer Guarantees Act 1993 and any other laws in relation to the products to which this warranty relates. This warranty:

- Covers the product against faulty materials or workmanship; and
- Covers the replacement of parts, the repair labour used, a refund of the price of the product or replacement of the machine, or other compensation for the remainder of the warranty period.

This product warranty is only applicable to the original purchaser of the machine and only purchases made from Euroquip Authorized Retailers.

2) WARRANTY PERIODS:

Domestic/Commercial: 12 Months

Or

1000 hours of operation – whichever occurs first.

Domestic Warranty applies to domestic use of the product: Personal, residential, or household use only. Commercial Warranty applies to commercial or business use of the product: All uses other than domestic use, including use for income-producing (including farming) or rental purposes.

*These Powermax Warranty periods are for products that are:

- Serviced by a Powermax Dealer in accordance with the Powermax service schedule, using genuine parts and the correct grade of oil (proof required)
- Meeting all other warranty requirements

NOTE: These warranty conditions apply to New Zealand only.

Euroquip warrants each new Powermax machine free from defect in material and workmanship under normal use and routine servicing, for the warranty periods specified. Conditional to the limitations and exclusions list below. The warranty period begins when the product is purchased by the end user. Warranty is not transferrable and is only claimable by the original purchaser.

Proof of purchase documentation with product serial number must be provided. If it has been lost and Euroquip does not have a record of the purchaser's details, the warranty period shall be calculated from the appropriate dealer wholesale sale date.

The purchaser must keep a record of all service and maintenance history as proof of servicing history. This may be requested when assessing any future warranty claims. The decision that an issue with a product qualifies as a warranty claim is made at the sole jurisdiction of Euroquip.

No costs incurred will be considered under warranty if repairs or maintenance are carried out by any party other than a Euroquip Approved Service Agent, unless with prior consent in writing from Euroquip.

It is the full responsibility of the purchaser to deliver the product under warranty to the nearest relevant service agent or product reseller. Warranty does not cover transportation costs including call outs, mileage and freight costs.

Customers are responsible for the care and cleaning of their product prior to sending it to our service centre. Any product being sent us must be thoroughly cleaned. Depending on what the product has come into contact with, it could pose an Occupational/ Work Health and Safety risk for our staff and or/service agents to inspect, repair or service a product that has come into contact with a hazardous substance. If we are asked to inspect, repair or service a product that has come into contact with a hazardous substance such as chemicals, asbestos or silica dust, we may not be able to inspect, service or repair the product. If this is the case, we will inform the purchaser and the product will be returned.

If a product is repaired under warranty, parts and labour required for the repair will be supplied at no charge. All defective parts replaced under warranty become property of Euroquip. Consumable items such as, but not limited to, oils, coolants, filter and spark plugs shall be the responsibility of the owner. Warranty assessment and repair will be scheduled and executed according to the normal work flow at the service location and depending on the availability of suitable replacement parts.

This warranty policy is an additional benefit and does not supersede the legal rights of any customer, reseller or service agent.

Should any issue be found to be a combination of a warranty failure and a non-warranty issue such as incorrect charging techniques, the repair cost component to rectify and repair the non-warranty failure is the **customer's** full responsibility.

3) EXCLUSIONS:

- Warranty does not cover parts that are subject to wear and tear from usage and/or damage which results from neglect of periodic maintenance.
- Evidence must be provided that the product has been maintained and serviced suitably for a claim to be considered under warranty.
- Batteries supplied with your product are warranted against defect for 3 months and does not include lack of charge due to non-use. Consumable items such as, but not limited to, oils, coolants, filters, spark plugs and batteries shall be the responsibility of the purchaser.
- Failure caused by incorrect operation of the product as specified in the manual either intentionally or by error.
- Lack of proper care and maintenance of the product.
- Any damage which results from unavoidable natural disasters, fire, collision, theft, etc.
- Any normal wear or deterioration, such as that of sliding or rotating parts caused under normal operating conditions.
- Any damage that results from misuse or use beyond the imitations of the products intended purpose (such as overloading or use under abnormal conditions).
- External circumstances such as product deterioration or corrosion due to environmental conditions like heat, cold, salt spray, sand or due to the passage of time
- Normal phenomena such as noise, vibration or oil seepage which are considered by Euroquip as not affecting the quality, function or performance of the product.
- Any damage due to improper storage or transport.
- Consumable replacement items: Spark plugs, contact points, shear pins, fuel strainers, oil filter elements, air cleaner elements, brake shoes or pads, clutch components, fuses, motor brushes, gaskets, tube or hoses, belts, cutting blades, light bulbs, serviceable bearings. Petroleum and others fluids: Oil, grease, battery electrolyte, and radiator coolant. Other items specified by Euroquip.
- Periodical maintenance items such as cleaning, inspection and adjustments.
- Contaminated fuel
- Modifications or installations of other products to the product
- Damage that results from the use of non-genuine parts, lubricant or fluid not approved by Euroquip
- Any repair and/or adjustment to correct improper or poor quality work previously performed.
- Attempted repair/ service by a party other than an Approved Service Agent, or any repair undertaken prior to approval of warranty by Euroquip is not covered under warranty.
- Warranty does not cover pre delivery service and adjustment, or failure that may occur as a result of lack of/ incorrect pre delivery service and adjustment. Warranty does not cover any incidental, indirect or consequential loss, damage, personal injury, or expense that may result from any defect, failure, malfunction, or misuse of a product.
- Any product that is found to have come into contact with hazardous substances such as chemicals, asbestos or silica dust and NOT been industrially cleaned prior to servicing.

4) HOW TO CLAIM WARRANTY:

In the event you are faced with a manufacturing fault with your Powermax product, you can claim a repair or part replacement under warranty if the following conditions are fulfilled:

- The problem is related to production quality or specifications of the machine
- The machine is within the warranty period outlined in schedule
- The issue does not fall within the warranty exclusions listed

If the criteria above is met, and you would like to request a warranty, then please go online to <https://www.euroquip.co.nz/Service-Request-End-User> and log your warranty claim.



Congratulations on your new POWERMAX product. We are proud to have you as our customer and will strive to provide you with the best service and reliability in the industry. This product is backed by our extensive warranty. To locate your nearest distributor or service agency call **0800 387 678**, or email us customerservice@euroquip.co.nz.