



GENERATOR

WE-22KVA
OWNER'S MANUAL

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USE A PORTABLE GENERATOR ONLY WHEN NECESSARY, AND ONLY TO POWER ESSENTIAL EQUIPMENT.

Position generators outdoors and well away from any structure. Running a generator inside any enclosed or partially enclosed structure can lead to dangerous and often fatal levels of carbon monoxide. Keep generators positioned outside and at least 15 feet away from open windows so exhaust does not enter your home/business or a neighboring home/business.

Keep the generator dry. Operate your generator on a dry surface under an open, canopy-like structure and make sure your hands are dry before touching the generator. Do not use the generator in rainy or wet conditions.

Make sure your generator is properly grounded. Grounding generators can help prevent shocks and electrocutions. Refer to OSHA guidelines for grounding requirements for portable generators.

Plug equipment directly into the generator. Use heavy-duty, outdoor-rated extension cords that are in good working condition and have a wire gauge that can handle the electric load of any connected appliances.

DO NOT plug the generator into a wall outlet. NEVER try to power your house/business by plugging the generator into a wall outlet or the main electrical panel. Only a licensed electrician should connect a generator to a main electrical panel by installing the proper equipment according to local electrical codes. Make sure the electrician installs an approved automatic transfer switch so you can disconnect your home's wiring from the utility system before you use the generator.

Maintain an adequate supply of fuel. Know your generator's rate of fuel consumption at various power output levels. Carefully consider how much fuel you can safely store and for how long. Gasoline and diesel fuel stored for long periods may need added chemicals to keep them safe to use. Check with your supplier for recommendations. Store all fuels in specifically designed containers in a cool, dry, well-ventilated place, away from all potential heat sources.

Turn the generator off and let it cool before refueling. Use the type of fuel recommended in the manufacturer's instructions.

Inspect and maintain your generator regularly. Check aboveground storage tanks, pipes, and valves regularly for cracks and leaks, and replace damaged materials immediately. Tanks may require a permit or have to meet other regulatory requirements. Purchase a maintenance contract and schedule at least one maintenance service per year, such as at the beginning of every season. Keep fresh fuel in the tank, and run the generator periodically to ensure it will be ready when you need it.

FORWARD
RECYCLING INFORMATION


All packaging, used oil, and batteries should be recycled according to the applicable government regulations.

OPERATOR SAFETY

Read the engine operator safety section and this operator manual safety instruction section carefully.

SAFETY INSTRUCTIONS
NOTICE! -EXHAUST FUMES FROM THIS MACHINE CAN BE TOXIC

- The exhaust fumes from this machine contain toxic carbon monoxide gas, which can cause shortness of breath, or even death.
- Avoid breathing fumes and always have proper ventilation.

NOTICE! - THIS MACHINE IS EXTREMELY HIGH FUEL, COMBUSTIBLE, AND TOXIC

- To prevent injury and/or explosion, turn generator off before refueling.
- Avoid smoking while refueling generator.
- When refueling generator, do not overflow. Keep generator in an upright position.

GENERATOR ENGINE AND MUFFLER MAY GET HOT

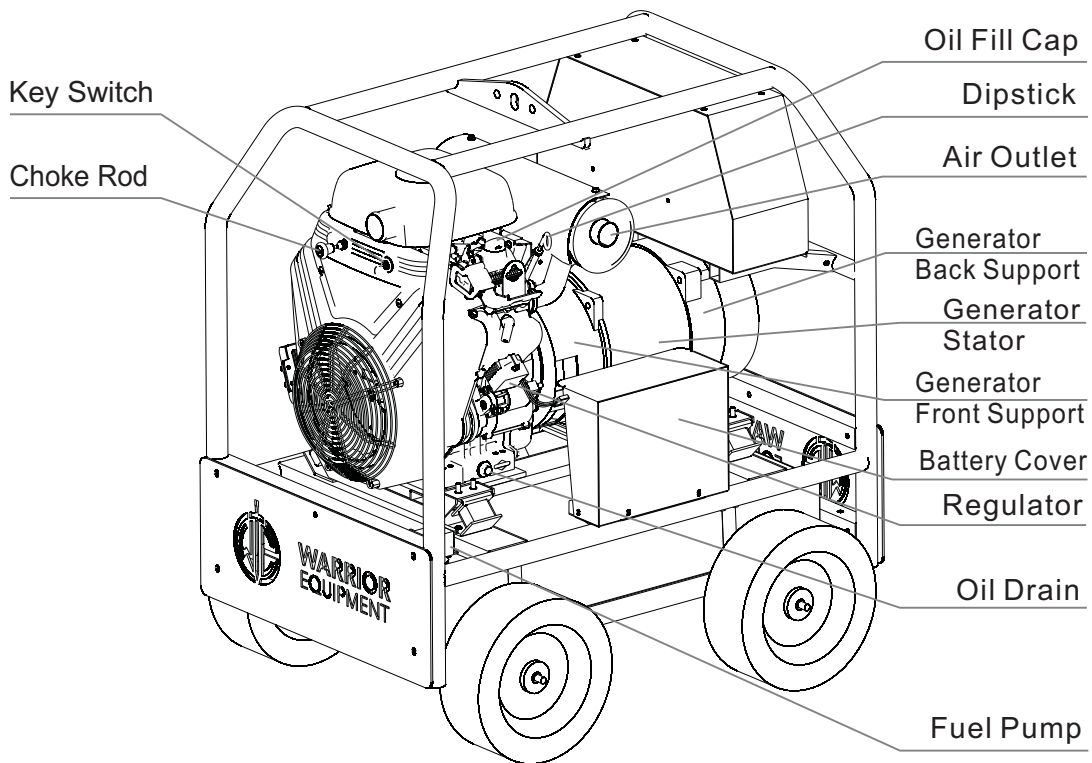
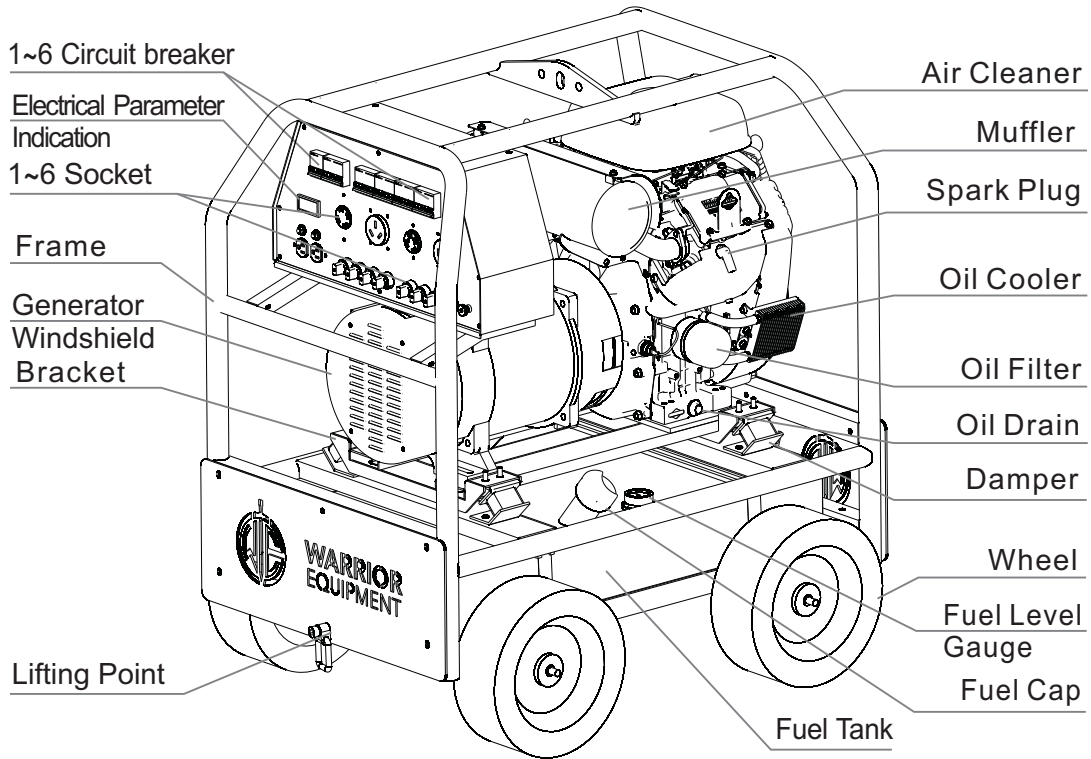
- Keep generator out of reach of children.
- Do not operate near open flames or flammable materials.
- A clearance of at least 3 feet should be maintained from all surrounding objects during operation to avoid overheating.
- Do not cover generator during operation.
- Muffler and engine may get hot during operation, no not touch.

WARNING! - PREVENTING ELECTRIC SHOCK

- Do not operate the generator in rain or snow.
- Do not touch the generator with wet hands to avoid electric shock.
- Electrocutation. Contact with bare wires, terminals, and connections while generator is running will result in death and/or serious injury.
- Electrocutation. Water contact with a water source, if not avoided, will result in death and/or serious injury.
- In the event of an electrical accident, immediately shut power OFF. Use non-conductive implements to free victim from live conductor. Apply first aid and get medical help.
- Disconnect the negative battery cable, then the positive battery cable when working on unit.


GENERATOR / WE-22KVA

WATTS	22,000	KVA	22
WEIGHT	726# /616#	VOLTAGE	120V/240V/480V
HZ	60	PHASE	1 & 3
HP	35	RPM	3,600



PREPARATION BEFORE RUNNING
NOTICE! - THIS MACHINE IS EXTREMELY HIGH FUEL COMBUSTIBLE AND TOXIC

- Verify engine oil level is correct.
- Verify fuel level is correct.
- Verify that unit is secure on level ground, with proper clearance and is in a well ventilated area.
- When connecting directly to a building electrical system, it is recommended that a manual transfer switch be used.

MACHINE OIL LEVEL

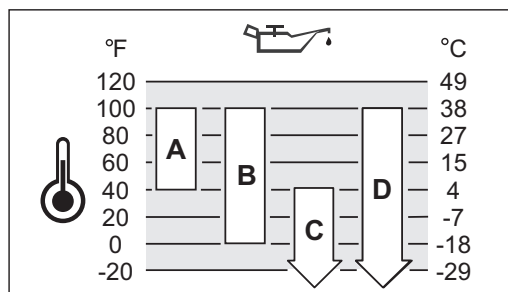
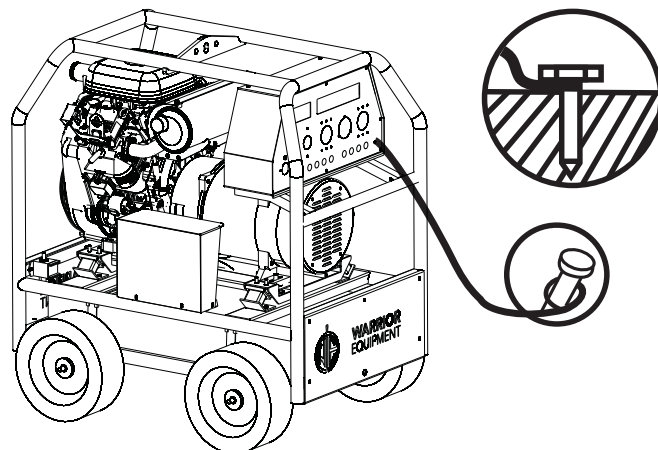
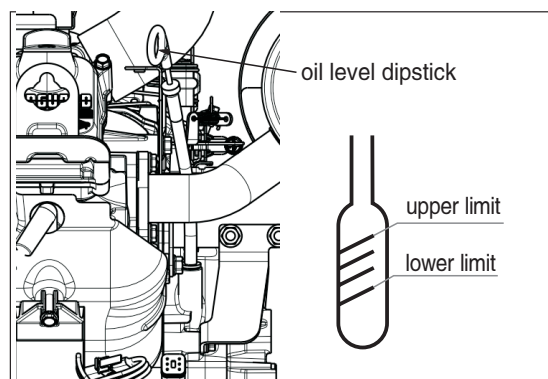
- Always turn off machine before checking oil level
- Low oil levels may cause serious damage to the machine
- Follow these steps to check oil level:

- 1) Unscrew the fuel cap, remove dipstick and wipe clean
- 2) Place the clean dipstick into the oil reservoir
- 3) Withdraw dipstick and read the oil level
- 4) If oil level is low, refill

- Use personnel protection equipment that is necessary or required by local regulations. Take notice of all safety and hazard notices of the machine.
- Use oils classified as SF or SJ or higher for best performance
- Other high quality oils are acceptable
- Do not use special additives
- Outdoor temperature determines which viscosity of oil the engine should use
- Use the chart below to select the best viscosity in different outdoor temperature ranges

WARNING!!!

The machine should be grounded in case of electricity leak.



A	SAE 30 - Below 40 °F (4 °C) the use of SAE 30 will result in hard starting.
B	10W-30 - Above 80 °F (27 °C) the use of 10W-30 may cause increased oil consumption. Check oil level more frequently.
C	5W-30
D	Synthetic 5W-30

NOTICE! - THE USE OF TWO-STROKE ENGINE OIL WILL SHORTEN THE LIFE OF THE ENGINE!

Fuel Recommendations

Fuel must meet these requirements:

- Clean, fresh, unleaded gasoline
- A minimum of 87 octane/87 AKI (91 RON)
- Gasoline with up to 10% ethanol (gasohol) is acceptable

NOTICE! -

- Do not use unapproved grades gasoline, such as E15 and E85
- Do not mix oil and gasoline together
- Do not modify the engine to run on alternate fuels. Use of unapproved fuels will damage the engine components, which will not be covered under warranty.
- To protect the fuel system from gum formation, mix a fuel stabilizer into the fuel.
- All fuel is not the same. If starting or performance problems occur, change fuel providers or change brands. This engine is certified to operate on gasoline. The emissions control system for this engine is EM (Engine Modifications).

WARNING! -

Adding Fuel

Fuel and fuel vapors are extremely flammable and explosive

- Turn engine off and let engine cool at least 2 minutes before removing the fuel cap.
- Fill fuel tank outdoors or in well-ventilated area.
- Do not overfill fuel tank. To allow for expansion of the fuel, do not fill above the bottom of the fuel tank neck.
- Keep fuel away from sparks, open flames, pilot lights, heat, and other ignition sources.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.
- If fuel spills, wait until it evaporates before starting engine.
- Follow these steps to check fuel level:
 - Directly observe the fuel level gauge
 - If the amount of fuel is low, refueling is needed

Follow these steps to refuel:

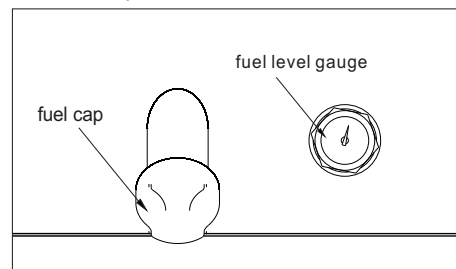
1. Clean the fuel cap area of dirt and debris. Remove fuel cap.
2. Fill the fuel tank with fuel. To allow for expansion of the fuel, do not fill above the bottom of the fuel tank neck.
3. Replace cap

GENERATOR START-UP AND RUN

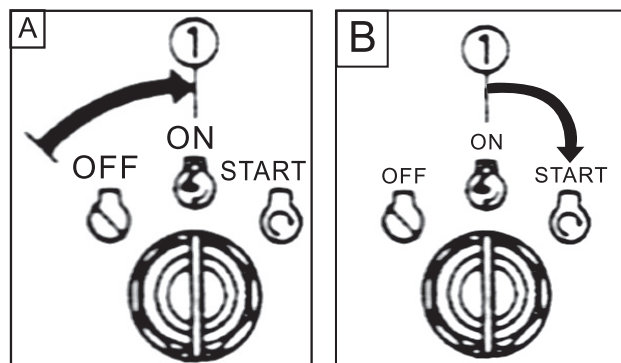
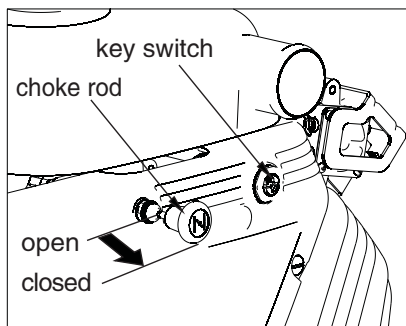
NOTICE! -

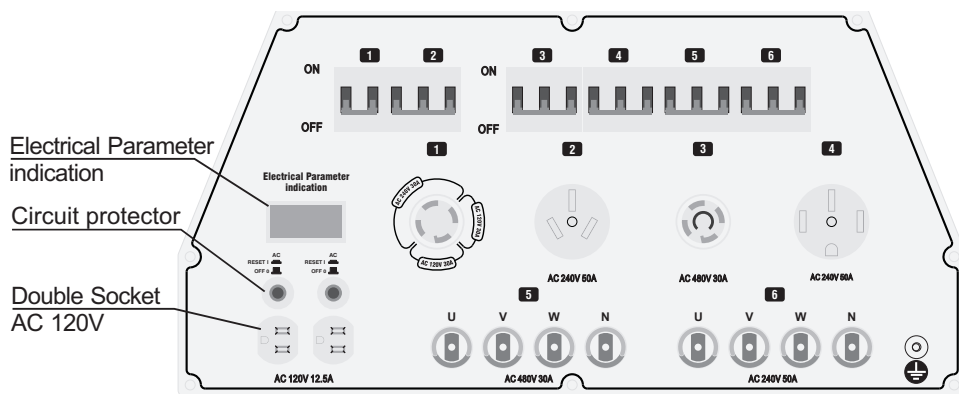
Since the engine requires a high current in the start-up stage, it can only work for a short time, which should not be over 10 sec. each time. The interval between starting should not be lower than 2 min. when continual starting is needed.

- Turn the engine key switch to the ON position
- Turn the key switch clockwise until engine starts
- Move the choke rod slowly to the OPEN position



4. Attach appropriate cord to the generator, connect the electrical equipment, and turn the power switch (circuit breaker protector) to the ON position





1	Circuit breaker Socket AC120V 30A	2	Circuit breaker Socket AC240V 50A	3	Circuit breaker Socket AC480V 30A	4	Circuit breaker Socket AC240V 50A	5	Circuit breaker Terminal AC480V 30A	6	Circuit breaker Terminal AC240V 50A
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WARNING!

- The throttle setting is pre-set before leaving the factory.
- If throttle adjustment is needed, consult an authorized technician.

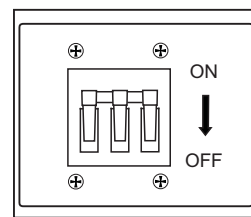
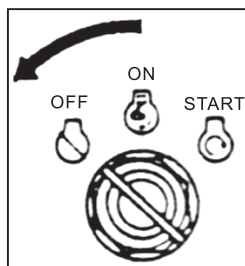
GEAR SHUT-DOWN

Emergency Situation

Turn the engine switch to the OFF position

Normal Circumstances

1. Stop all connections using power
2. Turn the key switch to the OFF position



ENGINE MAINTENANCE

Refer to the engine operator manual for air filters, spark plugs, etc...

- Turn off the engine and let cool before performing maintenance of any kind
- To prevent a sudden start, shut down engine switch, and pull out spark plug
- Unless users have the proper tools and maintenance material with specialized training, maintenance should be carried out by an authorized technician

Maintenance schedule:

Item	Whichever comes first should be done	Each time before running	1st month or 20 hours	Each quarter or 50 hours	6th month or 100 hours	Every year or 300 hours
Lubricant in engine	check level	0				
	change		0		0	
air filter	check					0
	clean	0		0(1)		
Dust collector	clean				0	
Spark plug	check and clean				0	
Spark eliminator(optional)	clean				0	
Oil tank and filter	clean					0(2)
Air mouth	check and adjust					0(2)
Gasoline supply lines	check	Once every two years (change if necessary)(2)				

GEAR SHUT-DOWN

NOTICE! -

- Make sure the engine key switch is in the OFF position during transportation
- Pay attention to the level of fuel oil. To prevent fire, do not overflow.

NOTICE! -

- When storing fuel or equipment with fuel in tank, store away from furnaces, stoves, water heaters or other appliances that have pilot lights or other ignition sources because they can ignite fuel vapors.

FUEL SYSTEM

Fuel can become stale when stored over 30 days. Stale fuel causes acid and gum deposits to form in the fuel system or on essential carburetor parts. To keep fuel fresh, use Briggs & Stratton Advanced Formula Fuel Treatment & Stabilizer, available wherever Briggs & Stratton genuine service parts are sold.

There is no need to drain gasoline from the engine if a fuel stabilizer is added according to instructions. Run the engine for two (2) minutes to circulate the stabilizer throughout the fuel system before storage.

If gasoline in the engine has not been treated with a fuel stabilizer, it must be drained into an approved container. Run the engine until it stops from lack of fuel. The use of a fuel stabilizer in the storage container is recommended to maintain freshness

ENGINE OIL

While the engine is still warm, change the engine oil. See the engine operator manual for Change Engine Oil section.

WARNING! -

Gasoline burns easily and can explode under certain conditions. The storage site must be well ventilated and the engine shut down. Do not smoke or spark during operation.

TROUBLESHOOTING

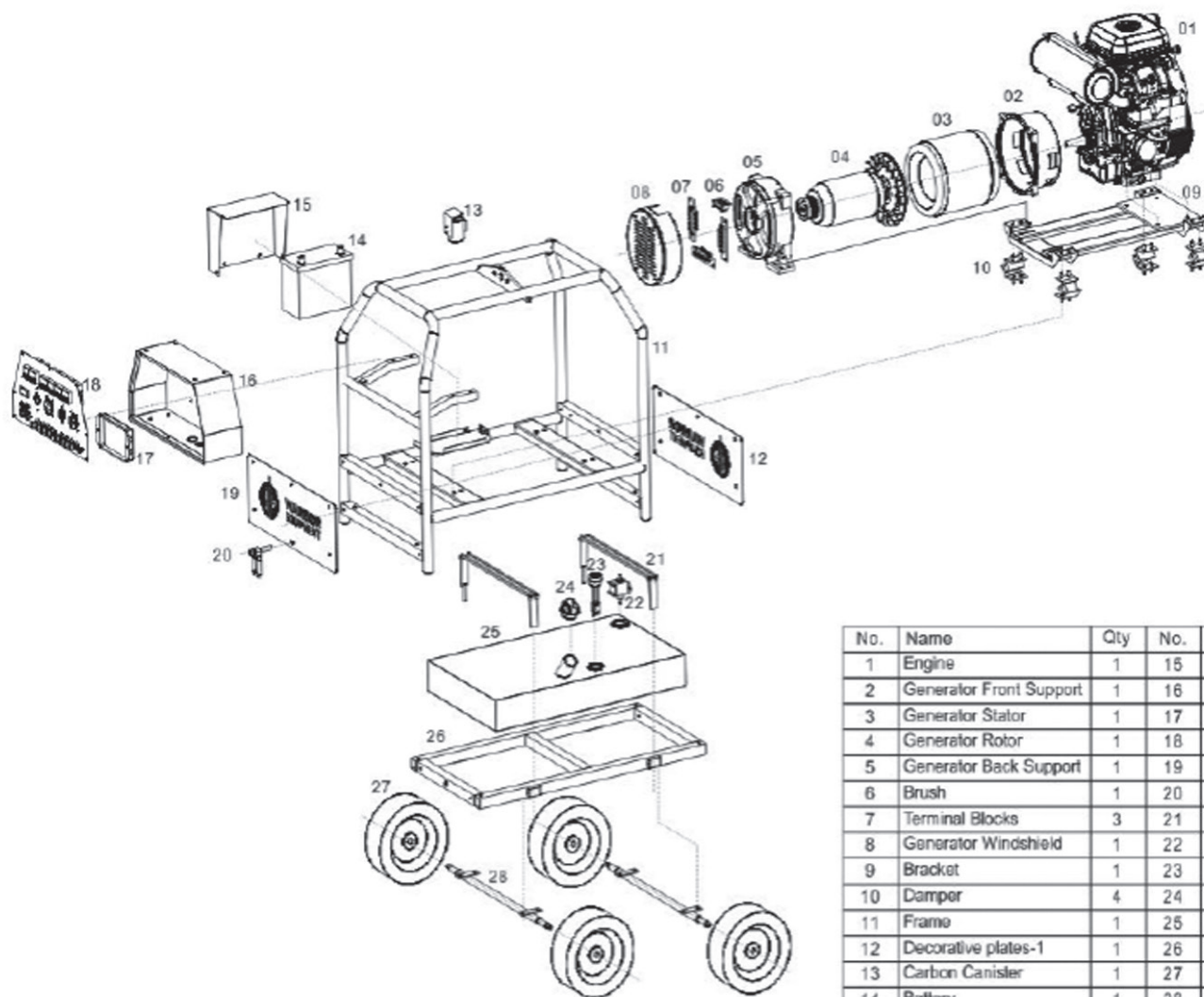
SEE NEXT PAGE FOR CHARTS

**TROUBLESHOOTING
ENGINE FAULTS**

Fault Phenomena	Possible Cause	Elimination Method
Starting difficult Not the Ignition	Engine key switch off Engine oil level is too low Spark plug fault Oil protector fault Ignition fault	Open the engine switch Add oil Replacement spark plug Contact manufacturer Contact manufacturer
Difficult starting No fuel	Low fuel Fuel cap air vent jammed	Add fuel Open jam
Difficult starting Cylinder pressure low	Loose or dead spark plug Combination of cylinder head and body in a flat surface Worn piston ring or cylinder wear Piston ring broken or carbon deposit jammed Valve card died or clearance valve is wrong	Tighten spark plug Wipe gaskets, tighten bolts Replace piston ring or body Replace piston ring or clean Adjust repair valve clearance
Engine not idling	Improper carburetor adjustment Congested oil or fuel line	Adjust the carburetor Clean oil and fuel lines
Engine idling instability	Carburetor spring is loose Air filter jam Spark plug gap is too big	Adjust spring Clean air filter Adjust clearance
Automatic engine stop	Fuel running out or oil shortage Oil line or carburetor jam Broken wire Other mechanical failure	Refuel Clean oil, carburetor Check the circuit Repair or replacement

**TROUBLESHOOTING
GENERATOR FAULTS**

Fault Phenomena	Possible Cause	Elimination Method
Volt meter, no current	AC circuit breaker	Circuit breaker complex located in the "ON" position
Exchange of current, electrical outlet no power	Volt meter is bad	Replace volt meter
No electricity in socket, no electrical current	Loose wires or disconnected Capacity overload Generator capacity and rotor is broken or burned Generator loss of electricity	Check loose parts are connected Replace capacitor Replacement Improve the generator speed or magnetization
Engine speed is normal voltage is low	Generator breakdown Generator capacity and rotor is broken	Replace capacitor Replace bridge group

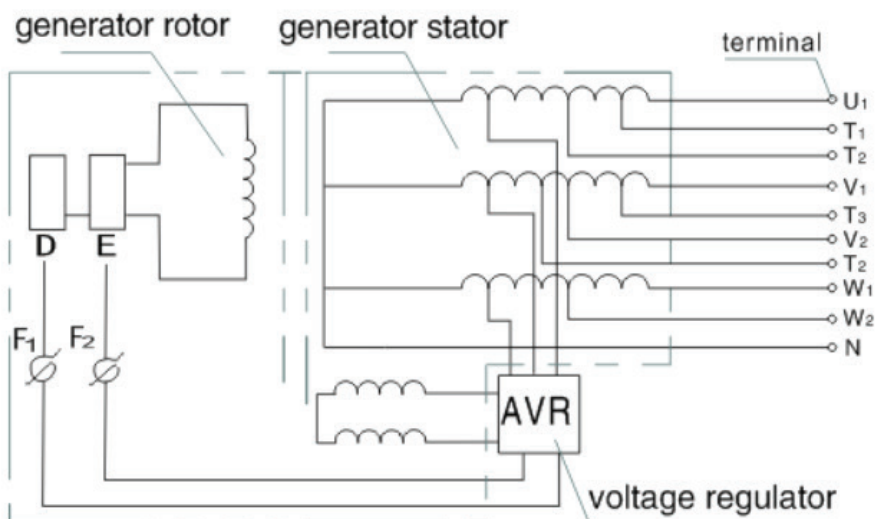
GENERATOR PARTS


No.	Name	Qty	No.	Name	Qty
1	Engine	1	15	Battery Cover	1
2	Generator Front Support	1	16	Control Box	1
3	Generator Stator	1	17	Voltage Regulator	1
4	Generator Rotor	1	18	Control Panel	1
5	Generator Back Support	1	19	Decorative plates-2	1
6	Brush	1	20	Lifting Point	1
7	Terminal Blocks	3	21	Fuel Tank Straps	1
8	Generator Windshield	1	22	Fuel Pump	1
9	Bracket	1	23	Fuel Level Gauge	1
10	Dampor	4	24	Fuel Cap	1
11	Frame	1	25	Fuel Tank	1
12	Decorative plates-1	1	26	Fuel Tank Bracket	1
13	Carbon Canister	1	27	Wheel	4
14	Battery	1	28	Axle	2

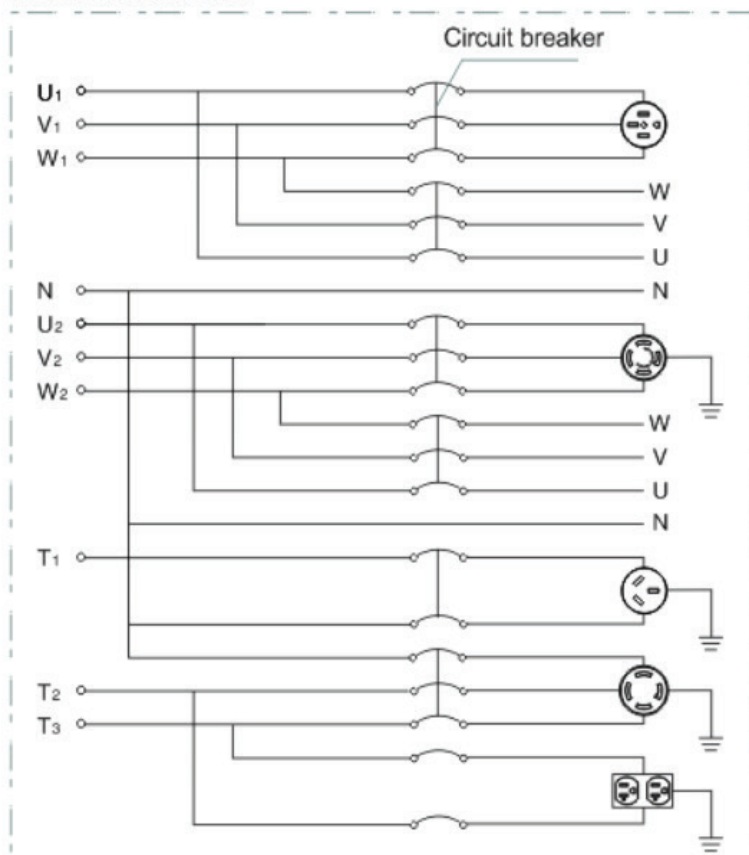
ENGINE PARTS

	Machine oil volume (L)	2.5				
	Noise(7m way) (db)	74				
GENERATOR	Total power (kVA)	22				
	Rated frequency (Hz)	60				
	Rated voltage (V)	480 Three phase	240 Three phase	240 single phase	120/240 single phase	120 single phase
	Rated current (A)	30	50	50	30	20A
COMPLETE MACHINE	Total length (mm)	1030				
	Total width (mm)	770				
	Total height (mm)	1120				
	G.W./N.W. (kg)	.				
STANDARD PARTS	Big-size air filter	.				
	Big-size gasoline tank	.				
	Big-size muffler	.				
	Gasoline meter	.				
	Voltage meter	.				
	Auto voltage adjuster	.				
	Alarm system for machine oil level	.				
	NO-fuse circuit breaker	.				
	Circuit protector	.				
	Battery cover	.				
	4-wheel wheel set	·(4)				

ELECTRICAL / TRANSMISSION LINE



Transmission Line



n e	Oil tank volume (L)	50
	Sustained working time(hr)	12.5(75% rated load)

WARRANTY

Warrior Equipment warrants, from the time of delivery and receipt by the original customer, new and unused equipment sold by Warrior Equipment or Warrior Equipment distributors. Goods shall be free from defect in workmanship and materials. Motor, Gearbox Gears, and VFD Inverter are covered for a period of 1 year or 300 hours, whichever comes first. If the product does not function satisfactorily during this period, Warrior Equipment will return the product to full working order for normal use which the product is intended for, with no charge for labor or spare parts, according to the following conditions:

1. The warranty only applies to persons that have legal right to the equipment during the warranty period.
2. The manufacturer's undertaking is limited to the repair of defective parts or the replacement of these according to the manufacturer's assessment. Costs and risks for transport as well as dismantling and reinstallation of the product / products and other direct or indirect costs, associated with the repair in question, are not covered by this warranty.
3. Periodic inspections, adjustments, maintenance work and changes are not covered by the warranty.
4. Warrior Equipment is not liable for any damages to grinding discs or other similar equipment.
5. The warranty only applies to material and design deficiencies and does not apply in the following cases:
 - Damage caused through accidents, carelessness, changes, use of spare parts or grinding tools that are not original components, or incorrect use and installation.
 - Damage caused by lightning, water, fire, vandalism, incorrect mains voltage, incorrect ventilation or other causes that lie outside of the manufacturer's control.
 - Unclaimed Damage caused during shipping. All shipments are insured by the shipper until the receiver signs freight company's release paper. Be sure to inspect before signing. If damaged mark clearly on paper and call us immediately.
6. Warrior Equipment reserves the right to modify the design or make improvements without obligation to change previously manufactured products.
7. All warranty repairs must be carried out by Warrior Equipment or by a Warrior Equipment accredited repair workshop. Costs for repairs, carried out by an unauthorized workshop, will not be reimbursed by Warrior Equipment. If such repairs damage this product these are not covered by the warranty agreement.
8. Warrior Equipment is not liable for shipping / transportation cost for repairs.
9. See Warrior Care for extended warranty coverage.

CONTACT US

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