



Diamapro[®]
SYSTEMS

OWNER'S MANUAL

DP-Gen-18Kw-Propane

GENERATOR



INSTRUCTION MANUAL
READ BEFORE OPERATING

INTRODUCTION

Thank you for purchasing a DIAMAPRO® SYSTEMS product.

This manual provides information and procedures to safely operate and maintain the DP-Gen-18Kw Propane Generator. For your own safety and protection from injury, carefully read, understand, and observe the safety instructions described in this manual.

Keep this manual or a copy of it with the machine. If you lose this manual or need an additional copy, please contact DiamoPro® Systems. This machine is designed and built with user safety in mind; however, it can present hazards if improperly operated and serviced.

Please follow the operating instructions carefully. If there are any questions regarding operating or servicing of this machine, please contact DiamoPro® Systems.

DISCLAIMER: DiamoPro and its affiliates take no responsibility for any damage, injury or death resulting from the incorrect or unsafe use of this product. Use of this product should be undertaken by competent persons only. It is the operator's responsibility to ensure that the following safety procedures are followed. If you are unsure, do not operate this product.

RECYCLING INFORMATION



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

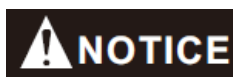
OPERATOR SAFETY

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

SAFETY MESSAGES



CAUTION - indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



NOTICE - indicates that failure to follow operation instructions can result in personal injury or damage to equipment.



WARNING - If these instructions are followed, the DiamoPro Systems' generator is safe and reliable. Be sure to read and understand the manual before operating machine to avoid or reduce the risk of serious injury or death.

SAFETY INSTRUCTIONS



Exhaust Fumes Could Be Fatal

- Running engine gives off Carbon Monoxide, an odorless, colorless, poisonous gas.
- Breathing Carbon Monoxide can cause nausea, fainting or death.
- Ensure there is adequate ventilation when using the generator.
- Position the generator so that the exhaust is pointing away from people or animals.
- Never use the generator indoors or in an enclosed area.



Flammable and Explosive Fuel

- Fuel and its vapors are extremely flammable and explosive
- Fire or explosion can cause severe burns or death
- Always switch the engine OFF when refueling.
- Always refuel away from any heat source.
- Always refuel in a well-ventilated area.
- Always keep the machine upright when operating or moving to avoid fuel leaks.
- Never overfill fill the tank, fill to the level specified.
- Never smoke while refueling.
- Never start the engine if there is a fuel spill. Any spillage must be wiped clean and the generator allowed to dry before attempting to start the engine.



Hot Surfaces

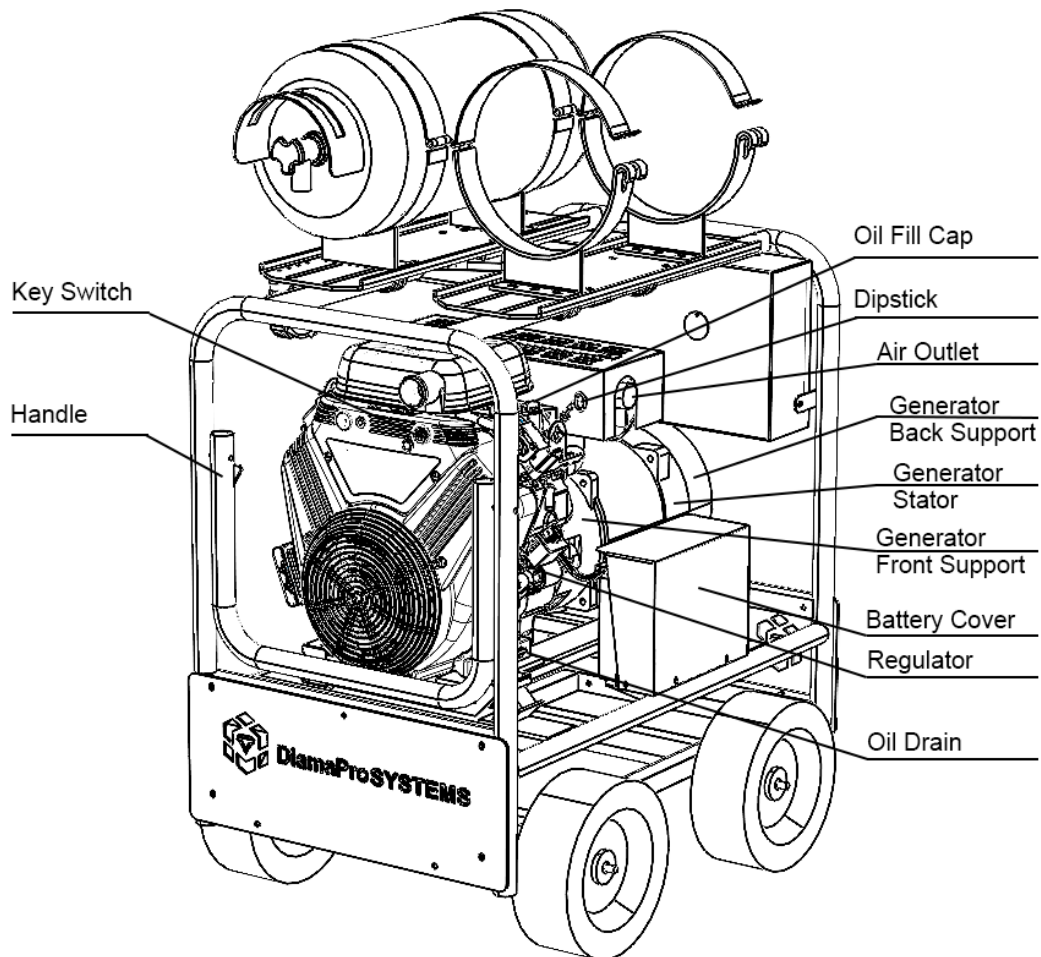
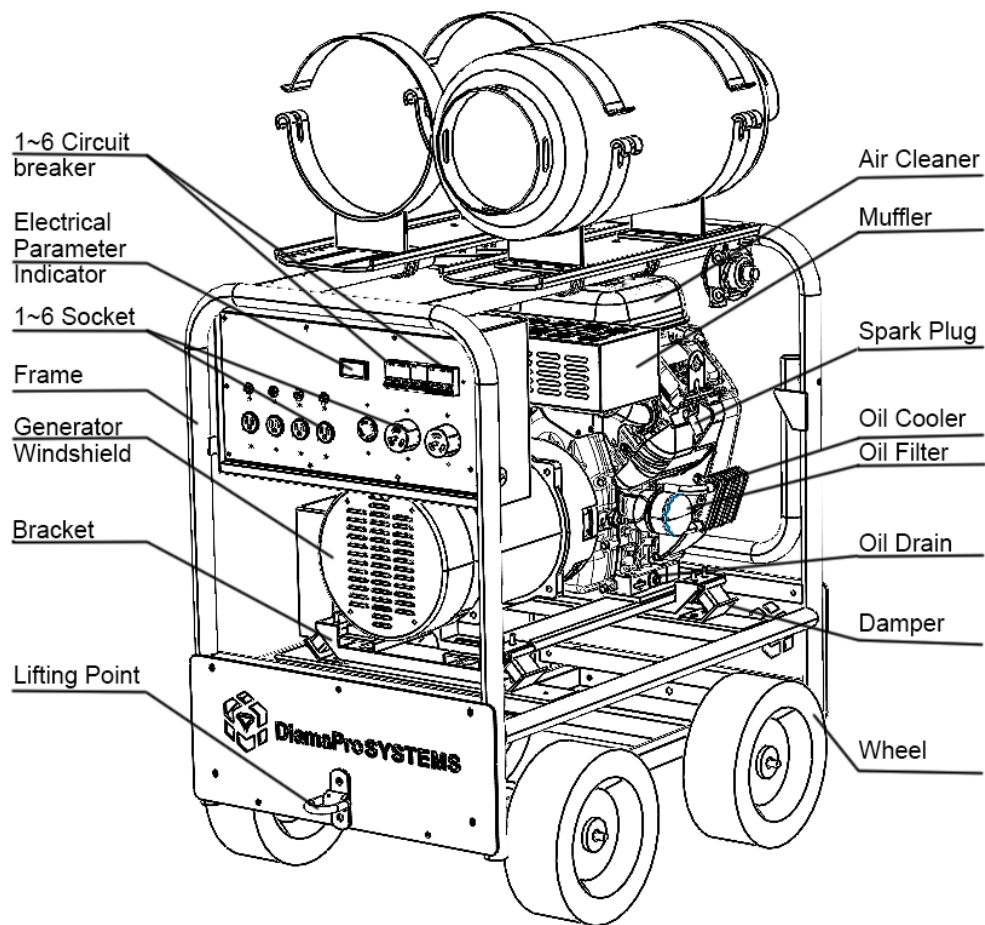
- Contact with engine's exhaust components could result in serious burns.
- During operation, touch only the control surfaces of generator.
- Keep children away from the generator at all times.
- During operation, do not cover dust-proof covers
- Keep flammable objects away from generator during operation
- Keep the generator at least 3 feet away from any surrounding building or structure to avoid burning
- Generator's muffler will be very hot after operation - Do not touch. Let cool before handling and storing to avoid fire or burns.



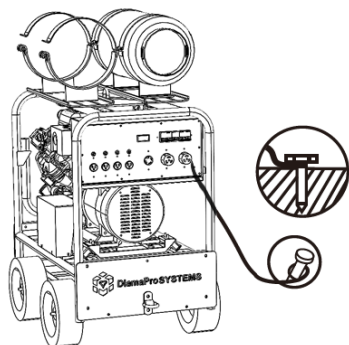
Risk of Electric Shock

- Test the GFCI's before use.
- Cover the generator when not in use and store away from damp or wet conditions.
- Never use the generator outdoors when it is raining or snowing or in wet or damp conditions.
- Never use water or any other liquids to clean the unit while it is running.
- Do not touch the machine with wet hands

STRUCTURE OF THE GENERATOR



PREPARATION BEFORE RUNNING



WARNING

Machine should be grounded to protect the user from electric shock or electrocution.



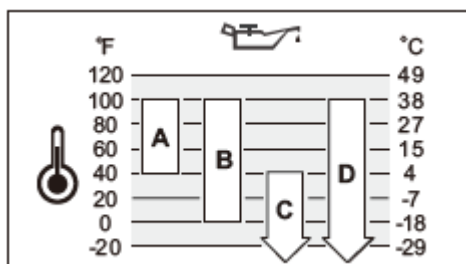
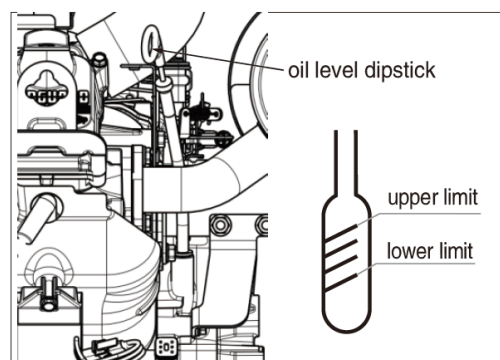
NOTICE

Machine Oil level Check

- Check the engine oil level with the engine stopped and in a level position. Running the generator without proper oil level could seriously damage the machine

1. Unscrew fuel cap. Remove oil dipstick, and wipe it clean
2. Fully insert the oil level dipstick, then remove to check oil level
3. If oil level is too low, fill with the recommended oil to the upper limit mark on the oil level dipstick.

We recommend using oils classified as SF, SJ or higher for best performance. Other high quality detergent oils are acceptable. Do not use special additives. Outdoor temperature determines which viscosity of oil the engine should use. Use charts to select the best viscosity in different outdoor temperature ranges.



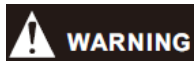
A	SAE 30 - Below 40 °F (4 °C) the use of SAE 30 will result in hard starting.
B	10W-30 - Above 80 °F (27 °C) the use of 10W-30 may cause increased oil consumption. Check oil level more frequently.
C	5W-30
D	Synthetic 5W-30



NOTICE

Using two stroke engine oil will shorten the life of the engine

Changing Fuel



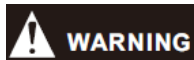
WARNING

Fuel and its vapors are extremely flammable and explosive. Fire or explosion can cause severe burns or death. When Changing Fuel

- Turn engine off and let engine cool at least 2 minutes before changing tank.
- Change propane tank outdoors or in well-ventilated area.
- Do not overfill propane tank
- 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.

Propane Tank

- Only use 33lb horizontal Vapor tank. It is recommended to use an aluminum Vapor tank rather than steel to to reduce the chance of freezing in colder environments

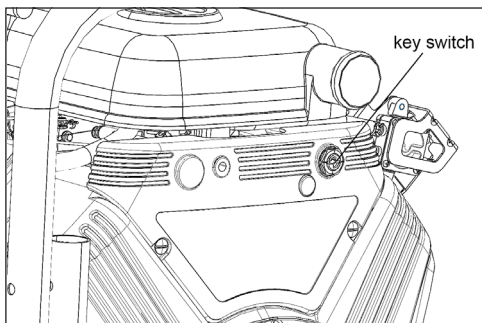


WARNING

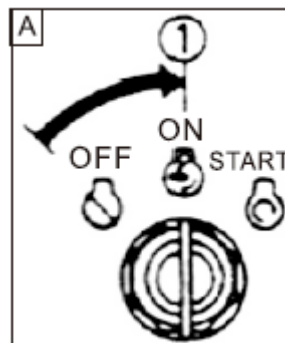
- When changing the propane tank the Generator must be turned off
- When changing tanks, the empty tank valve must be closed

ALL PROPER PPE MUST BE WORN WHEN CHANGING PROPANE TANK: gloves, eye protection, etc.

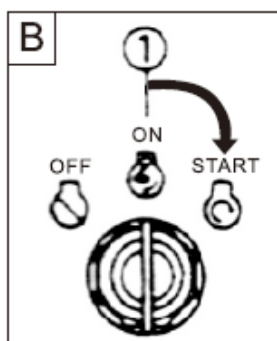
GENERATOR START-UP AND OPERATION



1. Locate key switch on the front of the machine.



2. Turn the engine key switch to "on" position.



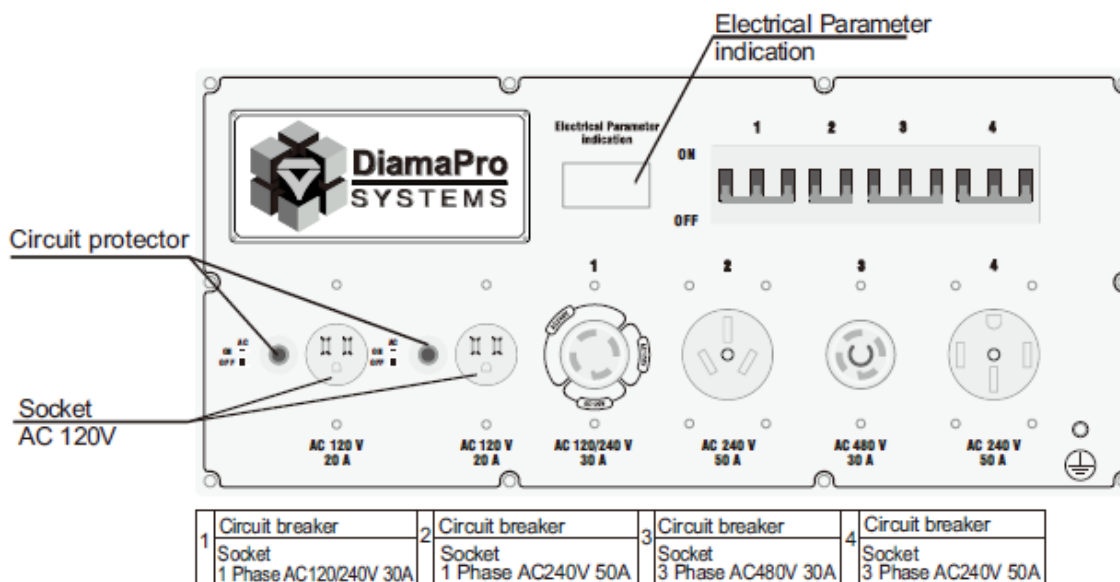
3. Turn the key switch clockwise until the engine is started.

NOTICE

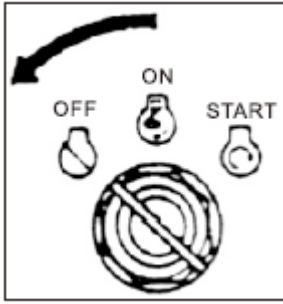
Since the engine requires high current in start-up stage, it can only work for a short time which should not be over 10 seconds each time. The interval between starting should not be lower than 2 minutes when continual starting is needed. Usually it should not be more than 10 continuous times in case it should damage the machine and the battery. The switch should be on "ON" (recharging) after it is started.

3. Slowly turn the choke rod to position "OPEN."

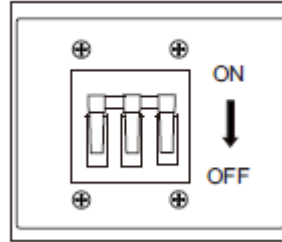
4. Connect the transmission line of generator set, connect the electrical equipment and put the power switch (circuit breaker protector) in the "on" position.



STOP GENERATOR



In an emergency situation:
Turn the ignition key to the "off" position.



In normal circumstances:
1. Disconnect all appliances connected to the generator
2. Turn the ignition key to the "off" position.

ENGINE MAINTENANCE

⚠ NOTICE

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

- Turn off engine and let cool before performing any maintenance.
- Maintenance and repairs should be performed by an authorized DiamoPro Systems' dealer or DiamoPro Systems' service technician.

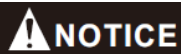
Maintenance Schedule:

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)
Propane supply lines	check	Once every two years (change if necessary)(2)				

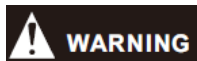
⚠ NOTICE

- (1). The interval of maintenance shall be shortened if the machine is used in dusty environment.
- (2). These items shall be done by those authorized companies by us except that the user has the appropriate tools and capability.

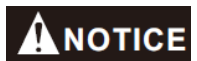
STORAGE AND TRANSPORT



Make sure the engine key switch is off during the transportation of the generator. Pay attention to the level of fuel oil, do not overflow. Spilled fuel could catch fire.



Contact with hot exhaust engine can lead to serious burns or fire. Only transport or store when generator is cooled completely.



When Storing Fuel or Machine with Fuel in Tank
Store away from furnaces, stoves, water heaters or other appliances that have pilot lights or other ignition sources that can ignite fuel vapors.

Engine Oil

Change engine oil while the engine is still warm.
First oil change is to take place after the 20-25 hours of use.
See the engine operator's manual for Change Engine Oil section.



CAUTION

Never put the machine with full propane tank in places where fumes could come into contact with ignition source (flames and/or sparks).

PROPOSITION 65 WARNINGS



THIS PRODUCT CONTAINS LEAD, A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.



THIS PRODUCT CONTAINS ONE OR MORE CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.



EXHAUST GASES FROM THIS PRODUCT CONTAIN CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

TROUBLESHOOTING

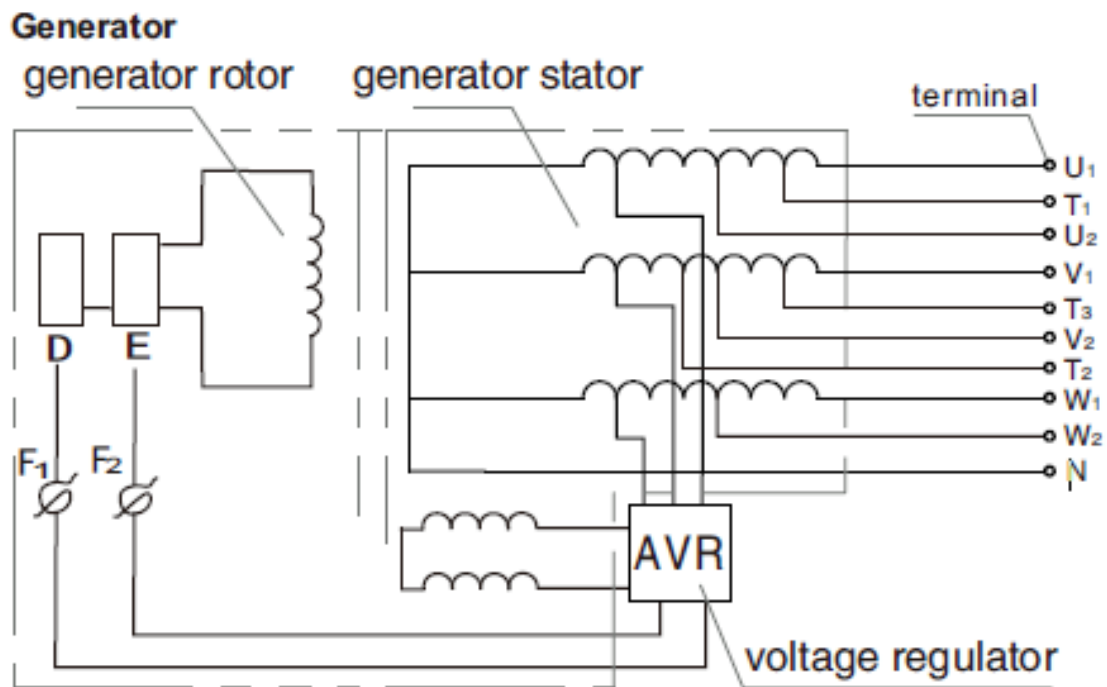
Engine fault

Fault phenomena	possible cause	Elimination method
Starting difficult Not the ignition	Engine key switch off	Open the engine switch
	Engine oil level is too low	Add oil
	Spark plug fault	Replacement spark plug
	The oil protector fault	And the dealer or factory contact
	Ignition fault	And the dealer or factory contact
Starting difficult No fuel	Propane tank is empty	Change propane tank
Automatic engine stop	Fuel running out of Oil shortage Oil road or carburetor jam Broken fire Other mechanical bite dead failure	Refuel Cleaning oil road, carburetor Check the circuit Figure it out for the repair or replacement after

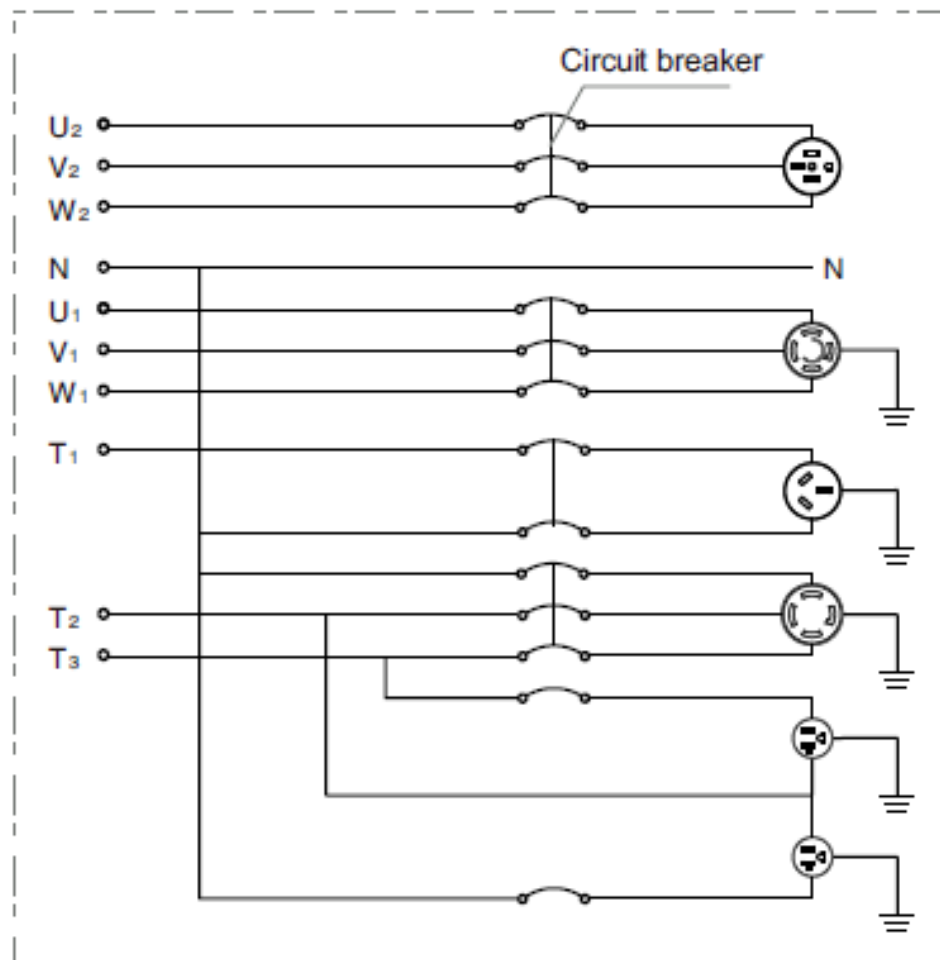
Generator fault

Fault phenomena	possible cause	Elimination method
The voltmeter instruction, communication socket in no current	AC circuit breaker not through	Will circuit breaker complex located in the "ON" position
Exchange of current meter, electrical outlet without instructions	Voltmeter bad	Replacement voltmeter
No instructions, communication socket voltmeter no current	1. Loose wires or fall off 2. Generator capacitance breakdown 3. Generator stator and rotor break or burned to the ground 4. Generator is loss of excitation	Check the loose parts and connected Replacement capacitor Replacement Improve the generator speed or magnetization
Engine speed normal, generator voltage is low	1. The part of generator capacitance breakdown 2. Generator rotor bridge group breakdown	Replacement capacitance Replacement bridge group

ELECTRICAL PRINCIPLE



Transmission Line



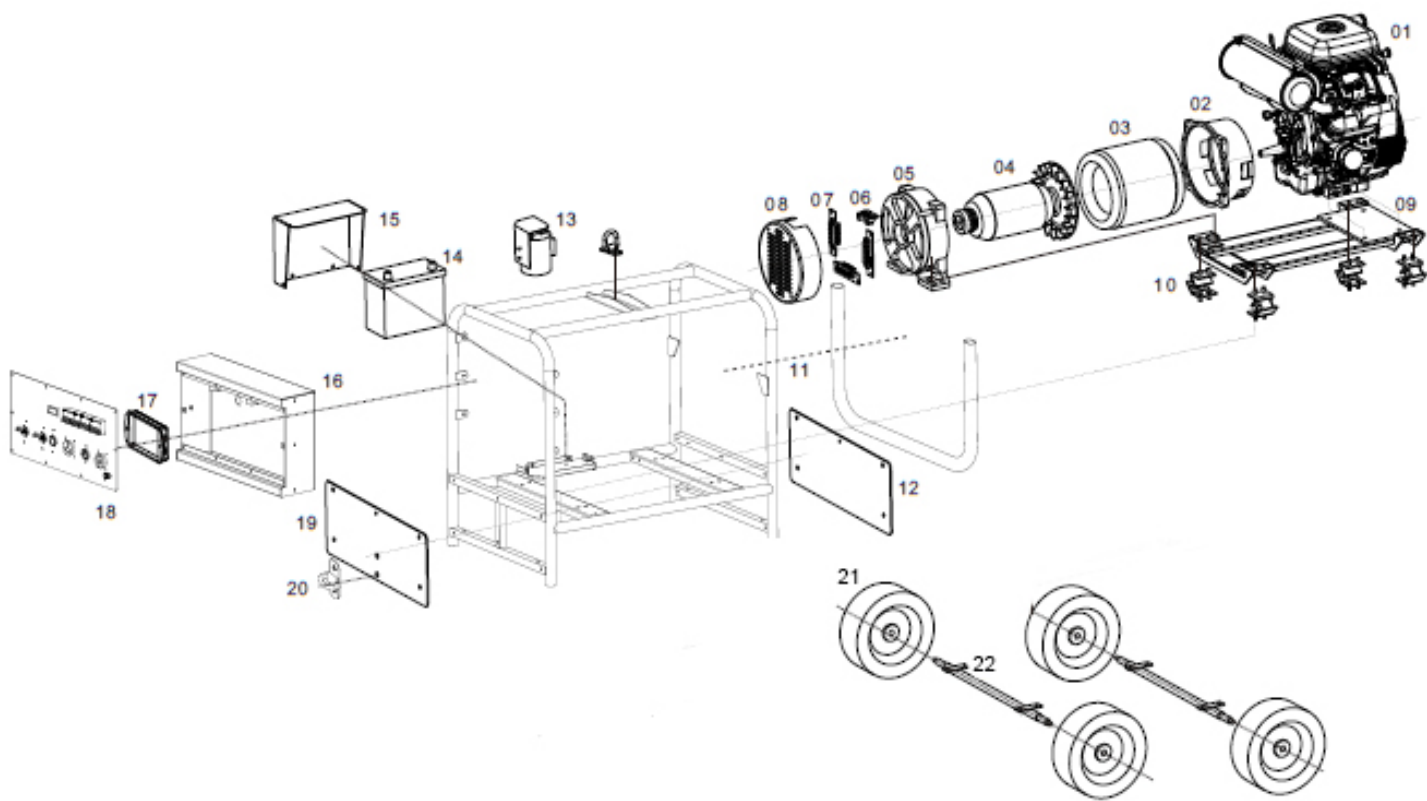
TECHNICAL SPECIFICATIONS

	MODEL	Gen-18Kw			
ENGINE	Pattern	Double cylinder, v-shaped, four-stroke, forced air cooling, overhead valve (OHV)			
	Displacement (cc)	993			
	Max power (hp/rpm)	35/3600			
	Ignition system	Non-contact electronic ignition			
	Start-up system	Electrical start			
	Propane tanks (lbs)	33 (qty. 2)			
	Workload (%)	100	75		
	Sustained working time (hr)	6	8		
	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
	Rated current (A)	30	50	50	30
COMPLETE MACHINE	Total length (in)	40.6			
	Total width (in)	30.3			
	Total height (in)	44.1			
	G.W./N.W. (lbs)	*			
STANDARD PARTS	Big-size air filter	*			
	Big-size gasoline tank	*			
	Big-size muffler	*			
	Voltage meter	*			
	Auto voltage adjustor	*			
	Alarming System for machine oil level in generator	*			
	NO-fuse circuit breaker	*			
	Circuit protector	*			
	Battery cover	*			
	4-wheel wheelset	* (4)			

1. * Means with ; - Means without

2. **NOTICE:** The sum of the power of each load shall not exceed the total power

PARTS LIST AND DIAGRAM



No.	Name	Qty.	No.	Name	Qty.
1	Engine	1	12	Decorative Plates-1	1
2	Generator Front Support	1	13	Carbon Canister	1
3	Generator Stator	1	14	Battery	1
4	Generator Rotor	1	15	Battery Cover	1
5	Generator Back Support	1	16	Control box	1
6	Brush	1	17	Voltage Regulator	1
7	Terminal Blocks	3	18	Control Panel	1
8	Generator Windshield	1	19	Decorative Plates-2	1
9	Bracket	1	20	Lifting Point	1
10	Damper	4	21	Wheel	4
11	Frame	1	22	Axle	2



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