

GENERAL INFORMATION AND SETUP

Fig. A

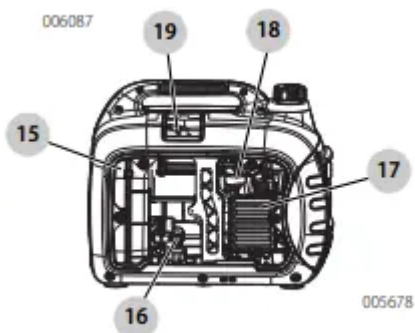
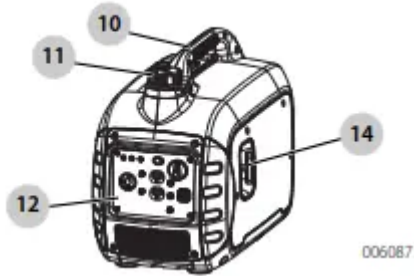
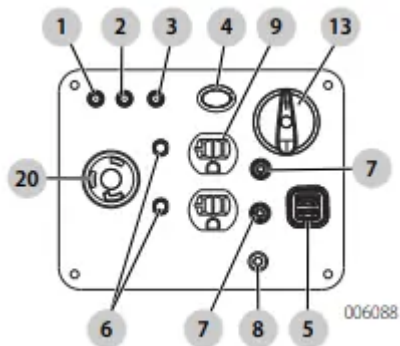


Fig. B



Generator Components

1. Low Oil Warning
2. Overload Warning
3. AC Power Light
4. Eco Mode Switch
5. 1A/2.1A, 5 VDC USB Ports
6. AC Breaker
7. Parallel Ports
8. Grounding Location

9. 120V, 20A Outlet
10. Handle
11. Fuel Tank Cap
12. Control Panel
13. Start Dial (Off/Run/Choke)
14. Recoil Starter
15. Muffler
16. Oil Fill/Drain
17. Air Cleaner
18. Carburetor
19. Spark Plug
20. 120V, 30A Outlet (NEMA L5-30R)

Product Specifications

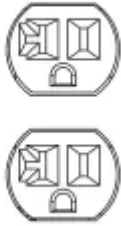
Generator Specifications	CMXGIAC3000
Rated Power	2300 W
Starting Power	3000 W
Rated AC Voltage	120V
Rated AC Load at 120V	19.1 Amps**
Rated Frequency	60 Hz
Dimensions L x W x H (in/mm)	22.25 x 13.35 x 18.4 (565 x 339 x 467)
Weight (dry)	59.5 lb. (27 kg)
<p>** Operating Temperature Range: -13 deg. C (8 deg. F) to 40 Deg. C (104 Deg. F). When operated above 25 deg. C (77 deg. F) there may be a decrease in power.</p> <p>** Maximum wattage and current are subject to, and limited by, such factors as fuel Btu content, ambient temperature, altitude, engine condition, etc.. Maximum power decreases about 3.5% for each 1,000 feet above sea level; and will also decrease about 1% for each 6° C (10° F) above 16° C (60° F) ambient temperature.</p>	
Engine Specifications	CMXGIAC3000
Engine Type	Single Cylinder, 4-stroke
Displacement	149 cc
Spark Plug Part Number	0K95530157
Spark Plug Type	E6TC / E6RTC or equivalent
Spark Plug Gap (in/mm)	0.024-0.028 (0.6-0.7)
Fuel Capacity / Type	4.3 L (1.14 U.S. gallons) / Unleaded
Oil Type	See Add Engine Oil
Oil Capacity	0.6 L (0.6 qt.)
Run Time at 50% Load	4.5 Hours
<p>* Go to WWW.CRAFTSMAN.COM or call 1-888-331-4569 for replacement parts.</p>	

Outlets

120 VAC, Duplex Outlet

The 120 Volt outlet is overload protected by the 20 Amp push button circuit protector (Fig. C).

Fig. C



120 VAC, 30 Amp Outlet

Use a NEMA L5-30R plug with this outlet. Connect a suitable 3-wire cord set to the plug and to desired load. The cord set should be rated for 125 Volts AC at 30 Amps (or greater) (Fig. D).

Use this outlet to operate 120 Volt AC, 60Hz, single phase loads requiring up to 3000 watts, 25 Amps starting power and 2300 watts of continuous power at 19.1 Amps. The outlet is protected by a 20 Amp push-to-reset circuit breaker.

Fig. D



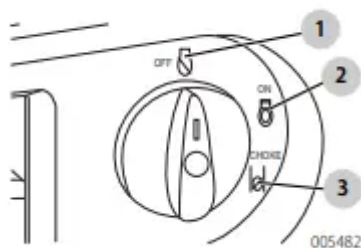
Start Dial (Off/Run/Choke)

This controls the ON/OFF functions, choke and fuel valve operation (Fig. E).

- The OFF position stops the engine and shuts off fuel flow.
- The RUN position is for normal operation and to gradually reduce the use of the choke.
- The CHOKE position switches the fuel valve on to start the engine.

NOTE: The CHOKE is not required to start a warm engine.

Fig. E



USB Ports

The 1 Amp and 2.1 Amp USB outlets allow charging of compatible electronic devices.

Eco Mode Switch



The economy switch has 2 modes of operation:

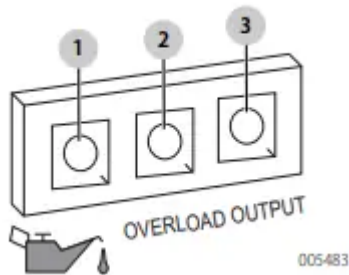
- On: The quietest mode and best when running appliances or equipment that are resistive loads (non-motor starting), (example: TV, video game, light, radio).
- Off: Best when running a both inductive (motor-starting loads) and resistive (non-motor starting loads), especially when these loads are turning on and off (example: RV, air conditioner, hairdryer)

Generator Status Lights

See Fig. F.

- Overload LED (red): Indicates system overload 2 . During motor starting it is normal for the overload LED to illuminate for a few seconds. If LED stays illuminated and the ready LED turns off, the engine will continue to run without output power. Remove all applied loads and determine if attached devices exceed recommended output power. Check for faulty or shorted connections. To restore electrical output, turn dial OFF to reset. Start engine. If condition was corrected, the red LED will not illuminate and electrical output will be restored. Loads can be applied once the green LED illuminates. If the orange LED returns, contact a Service Dealer.
- Low Oil Level LED (yellow): Illuminates when oil level is below safe operating level. Engine shuts down 1 .
- Power LED (green): Indicates output from generator 3 (unless there is a low oil or overload condition)

Fig. F



Circuit Breakers

The AC receptacles are protected by an AC circuit breaker. The DC receptacles are protected by a DC circuit breaker. If the generator is overloaded or an external short circuit occurs, the circuit breaker will trip. If this occurs, disconnect all electrical loads to determine the cause of the problem before using the generator again. Reduce the load if the circuit breaker is tripped.

NOTE: Continuous tripping of the circuit breaker may cause damage to generator or equipment.

Push the button of the breaker to reset the circuit breaker.

Remove Contents from Carton

1. Open carton completely by cutting each corner from top to bottom.

- Remove and verify carton contents prior to assembly. Carton contents should contain the following:

Accessories

Item	Qty.
Inverter Generator	1
Owner's Manual	1
Engine Oil	1
Oil Funnel	1
Tool Kit	1
Service Warranty	1
Emissions Warranty	1

- Call Customer Service at 1-888-331-4569 with the unit model and serial number for any missing carton contents.
- Record model, serial number, and date of purchase on front cover of this manual.

Add Engine Oil

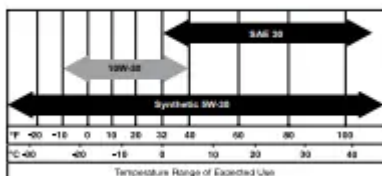
CAUTION: Engine damage. Verify proper type and quantity of engine oil prior to starting engine. Failure to do so could result in engine damage. (000135)

NOTE: The generator is shipped without oil in the engine. Add oil slowly and verify oil level often during filling process to ensure overfilling does not occur. See Fig. G and Fig. H.

- Place generator on a level surface.
- Clean area around oil fill and oil drain plug.
- Remove oil fill cap and wipe dipstick clean.
- Insert funnel into oil fill opening. Add recommended engine oil as necessary. Climate determines proper engine oil viscosity. See chart to select correct viscosity.

NOTE: Use petroleum based oil (supplied) for engine breakin before using synthetic oil.

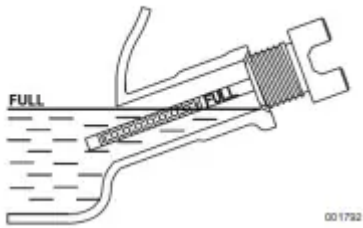
Fig. G



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5. To check oil level, remove funnel and insert dipstick into oil filler neck.

Fig. H



6. Remove dipstick and verify oil level is within safe operating range.

NOTE: Verify oil level often during filling process to ensure overfilling does not occur.

7. Install oil fill cap/dipstick and hand-tighten.

OPERATION

Operation and Use Questions

Call Customer Service at 1-888-331-4569 with questions or concerns about equipment operation and maintenance.

Before Starting Engine

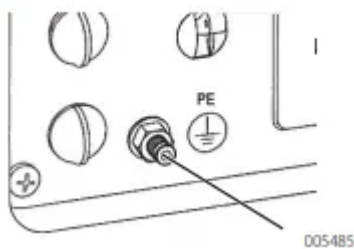
1. Verify engine oil level is correct.
2. Verify fuel level is correct.
3. Verify unit is secure on level ground, with proper clearance and is in a well ventilated area.

Grounding the Generator When In Use

See Fig. I. The generator is equipped with an equipment ground connecting the generator frame and the ground terminals on the AC output outlets (see NEC 250.34 (A)). This allows the generator to be used as a portable without grounding the frame of the generator as specified in NEC 250.34.

- Neutral Floating

Fig. I



The generator (stator winding) is isolated from the frame and from the AC outlet ground pin. Electrical devices that require a grounded outlet pin connection will not function if the outlet ground pin is not functional.

Know Generator Limits

Overloading a generator can result in damage to the generator and connected electrical devices. Observe the following to prevent overload:

- Add up the total wattage of all electrical devices to be connected at one time. This total should NOT be greater than the generator's wattage capacity.
- The rated wattage of lights can be taken from light bulbs. The rated wattage of tools, appliances, and motors can be found on a data label or decal affixed to the device.
- If the appliance, tool, or motor does not give wattage, multiply volts times ampere rating to determine watts (volts x amps = watts).
- Some electric motors, such as induction types, require about three times more watts of power for starting than for running. This surge of power lasts only a few seconds when starting such motors. Make sure to allow for high starting wattage when selecting electrical devices to connect to the generator:
 1. Figure the watts needed to start the largest motor.
 2. Add to that figure the running watts of all other connected loads.

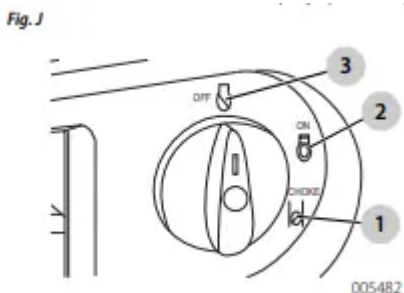
Transporting/Tipping of the Unit

Do not store or transport the unit at an angle greater than 15 degrees.

Starting Pull Start Engines

See Fig. J and Fig. K.

1. Rotate the Start Dial to CHOKE .
2. Switch Eco Mode Switch to OFF.
3. Firmly grasp recoil handle and pull slowly until increased resistance is felt. Pull rapidly up and away

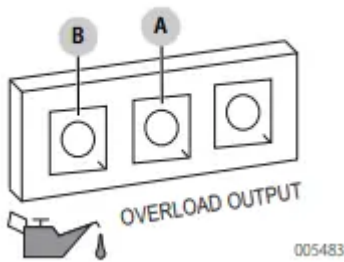


4. When engine starts, rotate Start Dial to RUN . Choke operation is reduced as Start Dial is rotated towards RUN.

NOTE: If engine fires, but does not continue to run, rotate the Start Dial to OFF and repeat starting instructions

IMPORTANT: Do not overload generator or individual panel outlets. If an overload occurs, the overload LED A will illuminate and AC output ceases. To correct, see Generator Status Lights. Read Know Generator Limits carefully

Fig. K



Generator Shut Down

CAUTION: Equipment and property damage. Disconnect electrical loads prior to starting or stopping unit. Failure to do so could result in equipment and property damage. (000136)

1. Shut off all loads and unplug electrical loads from generator panel outlets.
2. Let engine run at no-load for several minutes to stabilize internal temperatures of engine and generator.
3. Rotate Start Dial to OFF 3 . See Fig. J.
4. Turn fuel cap OFF.

Starting Hot Engines

CAUTION: Equipment and property damage. Disconnect electrical loads prior to starting or stopping unit. Failure to do so could result in equipment and property damage. (000136)

1. Turn Start Dial from STOP to RUN. This will open the fuel valve and permit starting. See Fig. J.
2. Firmly grasp recoil handle and pull slowly until increased resistance is felt. Pull rapidly up and away.

Low Oil Level Shutdown System

The engine is equipped with a low oil level sensor that shuts down the engine automatically when the oil level drops below a specified level to prevent engine damage B. The engine will not run until the oil has been filled to the proper level. See Fig. K. If the engine shuts down and there is sufficient fuel, check engine oil level.

Parallel Operation

For output power up to 4600 running Watts, two inverters can operate in parallel using Parallel Kit (optional). See the Parallel Kit Operator's Manual or contact Customer Service at 1-888-331-4569.

NOTE: All connections to the parallel kit should be made while both inverters are turned off and all loads disconnected.

1. Make sure the Eco Mode Switch is in the same position on both generators.
2. Make appropriate parallel connections to the outlets on each inverter as outlined in the owner's manual supplied with the kit.
 - NOTE: Do not disconnect any parallel kit connections once the units are running.
3. Start both units per starting instructions. Once the green output indicator illuminates, devices can be connected and turned on using the parallel kit outlet.
4. Follow Generator Shut Down instructions.
 - NOTE: Only use approved parallel kit.

MAINTENANCE AND TROUBLESHOOTING

Maintenance Schedule

Follow maintenance schedule intervals, whichever occurs first according to use.

NOTE: Adverse conditions will require more frequent service.

NOTE: All required service and adjustments should be each season as detailed in the following chart

At Each Use
Check engine oil level
Every 100 Hours or Every 6 Months
Clean/Replace Air Filter**
Change oil †
Muffler Screen
Clean/Replace Spark Arrestor
Every 300 Hours or Every Season*
Replace Spark Plug
Clean Spark Arrestor
Replace Fuel Filter +
Valve Clearance Adjustment
Clean/Replace Crankcase Breather Hose
Check Fittings/Fasteners +
† Change oil after first month or 20 hours of operation. + To be performed by a Service Dealer.
* Change oil every month when operating under heavy load or in high temperatures.
** Clean more often under dirty or dusty operating conditions. Replace air filter parts if they cannot be adequately cleaned.
*** Check valve clearance and adjust if necessary after first 50 hours of operation and every 300 hours thereafter.

Preventive Maintenance



Dirt or debris can cause improper operation and equipment damage. Clean generator daily or before each use. Keep area around and behind muffler free from combustible debris. Inspect all cooling air openings on generator.

WARNING: Personal injury. Do not insert any object through the air cooling slots. Generator can start at any time and could result in death, serious injury, and unit damage. (000142a)

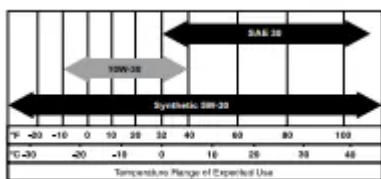
- Use a damp cloth to wipe exterior surfaces clean.
- Use a soft bristle brush to loosen caked on dirt, oil, etc.
- Use a vacuum to pick up loose dirt and debris.
- Low pressure air (not to exceed 25 psi) may be used to blow away dirt. Inspect cooling air slots and openings on generator. These openings must be kept clean and unobstructed.

NOTE: DO NOT use a garden hose to clean generator. Water can enter engine fuel system and cause problems. If water enters generator through cooling air slots, some water will be retained in voids and crevices of rotor and stator winding insulation. Water and dirt buildup on generator internal windings will decrease insulation resistance of windings.

Engine Maintenance

Engine Oil Recommendations

To maintain the product warranty, the engine oil should be serviced in accordance with the recommendations of this manual. For your convenience, maintenance kits designed and intended for use on this product are available from the manufacturer that include engine oil, oil filter, air filter, spark plug(s), a shop towel and funnel. These kits can be obtained by contacting Customer Service at 1-888-331-4569.



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Inspect Engine Oil Level

WARNING: Risk of burns. Allow engine to cool before draining oil or coolant. Failure to do so could result in death or serious injury. (000139)

Inspect engine oil level prior to each use, or every 8 hours of operation.

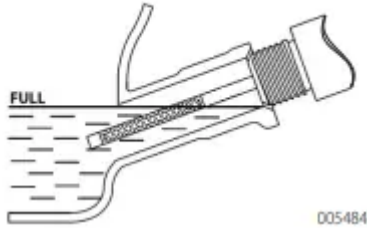
1. Place generator on a level surface.
2. Clean area around oil fill, and oil drain plug.
3. Remove oil fill cap and wipe dipstick clean (Fig. L).

Fig. L



4. To check oil level, insert dipstick into oil filler neck without screwing it in (Fig. M).

Fig. M



5. Remove dipstick and verify oil level is within safe operating range.

6. Add recommended engine oil as necessary.

NOTE: Verify oil level often during filling process to ensure overfilling does not occur.

7. Replace oil fill cap and hand-tighten.

NOTE: Some units have more than one oil fill location. It is only necessary to use one oil fill point.

Change Engine Oil

When using generator under extreme, dirty, dusty conditions, or in extremely hot weather, change oil more frequently.

NOTE: Don't pollute. Conserve resources. Return used oil to collection centers.

Change oil while engine is still warm from running, as follows:

1. Place generator on a level surface.
2. Disconnect the spark plug wire from the spark plug and place the wire where it cannot contact spark plug.
3. Clean area around oil fill and oil drain plug.
4. Remove oil fill cap and wipe dipstick clean.
5. Tip unit and drain oil completely into a suitable container.
6. Once oil is sufficiently drained from unit, tip unit back to a level position.

7. Insert funnel into oil fill opening (Fig. N). Add recommended engine oil as necessary.

◦ Fig. N



8. To check oil level, remove funnel and insert dipstick into oil filler neck without screwing it in (Fig. M).

9. Remove dipstick and verify oil level is within safe operating range.

◦ NOTE: Verify oil level often during filling process to ensure overfilling does not occur.

10. Replace oil fill cap and hand-tighten.

11. Wipe up any spilled oil.

12. Properly dispose of oil in accordance with all applicable regulations.

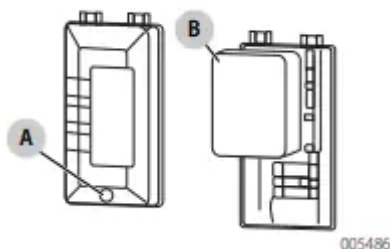
Air Filter

Engine will not run properly and may be damaged if run with a dirty air filter. Service air filter more frequently in dirty or dusty conditions.

To service air filter (Fig. O):

1. Unscrew bolt and remove air filter cover.
2. Wash filter in soapy water. Squeeze dry in clean cloth (DO NOT TWIST).
3. Clean air filter cover before installation.
4. Replace side cover and screws.

Fig. O



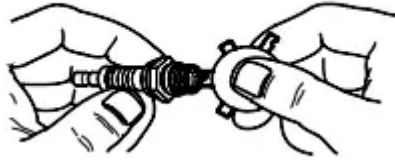
Service Spark Plug

To service spark plug:

1. Remove spark plug cover.
2. Clean area around spark plug.
3. Remove and inspect spark plug.

4. Inspect electrode gap with wire feeler gauge and reset spark plug gap to 0.6 - 0.7mm (0.024 - 0.028 in) (Fig. P).

Fig. P



NOTE: Replace spark plug if electrodes are pitted, burned or porcelain is cracked. Use ONLY recommended replacement plug. See Product Specifications.

5. Install spark plug finger tight, and tighten an additional 3/8 to 1/2 turn using spark plug wrench.

Inspect Muffler and Spark Arrester

NOTE: It is a violation of California Public Resource Code, Section 4442, to use or operate the engine on any forestcovered, brush-covered, or grass-covered land unless the exhaust system is equipped with a spark arrester, as defined in Section 4442, maintained in effective working order. Other states or federal jurisdictions may have similar laws.

Contact original equipment manufacturer, retailer, or dealer to obtain a spark arrester designed for exhaust system installed on this engine.

NOTE: Use ONLY original equipment replacement parts. Inspect muffler for cracks, corrosion, or other damage. Remove spark arrester, if equipped, inspect for damage or carbon blockage. Replace parts as required.

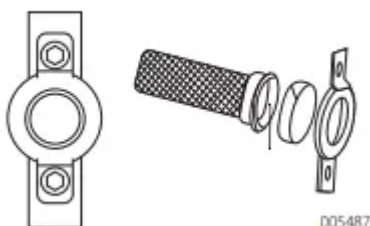
Clean Spark Arrestor Screen

The engine exhaust muffler has a spark arrestor screen. Inspect and clean the screen every 100 hours of operation or every season, whichever comes first.

To service spark arrestor (Fig. Q):

1. Remove the clamp to remove retainer.
2. Slide spark arrestor screens out from the muffler outlet tube.
3. Inspect screens and replace if torn, perforated or otherwise damaged. Do NOT use a defective screen. If screen is not damaged, clean with a commercial solvent.
4. Replace the screens, and retainer, and secure with clamp

Fig. Q



Valve Clearance

IMPORTANT NOTE: If uncomfortable about doing this procedure, or the proper tools are not available, take generator to the nearest service center to have valve clearance adjusted.

Check valve clearance after the first fifty-hours of operation. Adjust as necessary.

- Intake — $0.10 \pm 0.02\text{mm}$ (cold), (0.004" \pm 0.001" inches)
- Exhaust — $0.10 \pm 0.02\text{mm}$ (cold) (0.004" \pm 0.001" inches)

Storage

It is recommended to start and run the generator for 30 minutes, every 30 days. If this is not possible, refer to the following list to prepare unit for storage.

- DO NOT place a storage cover on a hot generator. Allow unit to cool to room temperature before storage.
- DO NOT store fuel from one season to another unless properly treated.
- Replace fuel container if rust is present. Rust in fuel will cause fuel system problems.
- Cover unit with a suitable protective, moisture resistant cover.
- Store unit in a clean, dry area.
- Always store generator and fuel away from heat and ignition sources.

Prepare Fuel System/Engine for Storage

Fuel stored over 30 days can go bad and damage fuel system components. Keep fuel fresh, use fuel stabilizer.

If fuel stabilizer is added to fuel system, prepare and run engine for long term storage. Run engine for 10-15 minutes to circulate stabilizer throughout fuel system. Adequately prepared fuel can be stored up to 24 months.

NOTE: If fuel has not been treated with fuel stabilizer, it must be drained into an approved container. Run engine until it stops from lack of fuel. Use of fuel stabilizer in fuel storage container is recommended to keep fuel fresh.

1. Change engine oil.
2. Remove spark plug.
3. Pour tablespoon (5-10cc) of clean engine oil or spray a suitable fogging agent into cylinder.
 - **WARNING:** Vision Loss. Eye protection is required to avoid spray from spark plug hole when cranking engine. Failure to do so could result in vision loss.
(000181)
4. Pull starter recoil several times to distribute oil in cylinder.
5. Install spark plug.

6. Pull recoil slowly until resistance is felt. This will close valves so moisture cannot enter engine cylinder. Gently release recoil.

Change Oil

Change engine oil before storage. See, Change Engine Oil.

Troubleshooting

Engine won't start.

- Dial turned off.
 - Turn on Dial.
- Out of fuel.
 - Fill fuel tank.
- Defective spark plug.
 - Replace spark plug
- Plugged fuel filter.
 - Replace fuel and fuel filter
- Defective or stuck Dial assembly.
 - Contact Customer Service at 1-888- 331-4569.
- Incorrect engine oil level.
 - Check/fill engine oil
- Defective ignition coil.
 - Contact Customer Service at 1-888- 331-4569.
- Fuel cap vent OFF.
 - Turn fuel cap vent ON.
- Carb is flooded.
 - Drain carb
- Throttle plate closed.
 - Open throttle plate (push toward back of unit).

Engine starts, then shuts down.

- Out of fuel.
 - Fill fuel tank.

- Incorrect engine oil level.
 - Check engine oil level.
- Contaminated fuel.
 - Contact Customer Service at 1-888- 331-4569.
- Defective low oil level switch.
 - Contact Customer Service at 1-888- 331-4569.

Engine will not start; or starts and runs rough.*

- Choke is stuck or left on.
 - Turn choke off.
- Dirty or clogged air filter.
 - Clean or replace air filter.
- Defective or dirty spark plug.
 - Replace spark plug.
- Dirty fuel filter.
 - Replace fuel and fuel filter.
- Dirty or gummed up carburettor.
 - Clean carburetor.
- Unit not warmed up.
 - Gradually adjust Dial and reduce choke until engine runs smoothly in RUN position.
- Spark arrestor clogged.
 - Clean spark arrestor.

No AC output.

- Generator is overloaded.
 - Disconnect all loads. Shut down generator to reset module. Reduce loads, restart generator.
- Inverter module is overheated.
 - Verify service door is ON. Let cool 15 minutes by running engine without AC output. Press and hold Reset button on control panel, restart generator.

- Short circuit in electrical device.
 - Verify condition of extension cords and items being powered. Press and hold Reset button on control panel.
- Defective inverter assembly
 - Contact Customer Service at 1-888- 331-4569.

Fuel leaks from drain hoses.

- Carburetor drain in bowl is not closed.
 - Turn valve clockwise to close.

Warning

This content is compiled from multiple sources and is provided for reference purposes only. It may not be complete or fully applicable to all situations. If you are unable to resolve your issue, please contact the product manufacturer or an authorized service provider for official support.