

**WARNING:** All service and maintenance work should be performed with the genset engine off and the positive battery cable disconnected.

### The Don'ts

1. DON'T obstruct the exhaust or air intake with clothing, furniture or any other material.
2. DON'T run the genset for long periods of time *without* using it to power appliances. This wastes gas and may cause the engine to misfire.
3. DON'T operate the genset in an area where the wind does not carry away the exhaust fumes.
4. DON'T sleep with the genset running unless the RV is equipped with an operating carbon monoxide detector.
5. DON'T store anything, especially gas, oil, rags or other flammable materials in the genset compartment.
6. DON'T attempt to adjust the carburetor, governor, choke, etc. unless you are qualified to do so. Depend on the expertise of your certified Onan Service & Parts Dealer.
7. DON'T handle electrical wires from the genset while it is running. Failure to observe this rule could result in your finding a wire with worn insulation, but not being around to repair it.



### COMMONLY ASKED QUESTIONS

- Q:** Can generators charge my vehicle's battery?  
**A:** No, not directly. But a genset does provide power to operate your converter/charger which charges batteries.
- Q:** Is it practical to run the air conditioner on my generator while traveling on the road?  
**A:** Yes, that is what a generator is for, portable electrical power. In fact it can help you economize on your vehicle fuel because less gas is used by the genset. And besides providing on the road comfort, it gives you an opportunity to exercise your genset. Any appliance that can be run in a stationary position can be powered while driving.
- Q:** Can I run my generator for extra power while I'm hooked up to shore power at a camp ground?  
**A:** Only if the RV manufacturer has supplied a separate circuit for a second air conditioner. If you have two air conditioners in your motorhome, only one will operate while plugged into commercial shore power. By the NFPA code you cannot connect both power sources, genset power and commercial shore power, together. Motorhome electrical systems are designed to separate these two power sources. However, with your comfort and needs in mind, your RV manufacturer may have wired the motorhome to allow you to power your second air conditioner with your RV generator. Check your vehicle operator manual.
- Q:** Will increasing the speed (accelerating the RPM) on my generator provide more power potential?  
**A:** No, damage to generator and appliances may result.
- Q:** Can I use the MicroLite 4000 or Emerald 4000 genset to run two air conditioners?  
**A:** Depends on the air conditioner's size and BTU output. Consult your certified Onan Service & Parts Dealer for starting requirements.
- Q:** Can I run an RV genset in a National Park?  
**A:** Yes, if you have an Onan Marquis or MicroLite genset installed in your RV. Laboratory tests have shown that they measure 56 to 58 dB(A) at 50 ft., which is so quiet it meets and exceeds the United States National Park Service Standard noise requirements of 60 dB(A) (36 CFT, Chapter 1, paragraph 2.12). [Comparison example: Room conversation is typically 62 dB(A).]

**Q:** What is carburetor icing? What conditions cause it? How can it be prevented?

**A:** Carburetor icing occurs in damp, cool outside conditions, causing rough operation, stalling, and throttle sticking. Operate the set in the "winter" position in humid temperatures of 50° or less. This will pre-heat the intake air and prevent ice formation in the carburetor.

**Q:** Why can't I use will-fit genset replacement parts? How are they different from Onan genuine RV parts?

**A:** Onan genuine Green Label genset parts are tested and designed specifically for RV applications. Will-fit parts and gaskets can be the correct shape, but because of inadequate design, the wrong material, or poor quality, premature failure, leakage or performance problems may result. And use of oil and air filters other than Onan/Green Label may void your genset warranty.

**Q:** I lost my Onan RV genset operator manual. Can I get another copy?

**A:** Yes. Operator Manuals are available from your local certified Onan Service & Parts Dealer for a nominal charge. (See list of Onan Operator Manuals on page 31).

**Q:** Will performing my own genset maintenance affect my warranty?

**A:** No, Onan operator manuals describe proper genset operator maintenance procedures and schedules. But improperly performed maintenance obviously affects warranty coverage.

**Q:** How frequently should I change oil if I won't be using the genset for several months?

**A:** Typically just like a car, change oil for seasonal temperature changes. For long storage, see your operator's manual for extended out-of-service protection.

**Q:** Is it possible to make my older model genset quieter?

**A:** Enclosure, sound muffling/deadening material, resonator and periodic maintenance are all possible solutions. Contact your local certified Onan Service & Parts Dealer to review your specific situation opportunities.

**Q:** Can I run my genset with the coach access door open?

**A:** It does not matter if the coach access door is open or closed, however the set will be quieter with the access door closed. In a properly designed compartment, the door helps reduce noise. In most cases, whether the coach access door is opened or closed will not affect cooling, but will impact noise. Onan Marquis gensets are designed to bring air into the genset compartment from underneath. So in the case of a Marquis genset, operating it with the access door open may affect engine cooling and genset performance.

**Q:** Should I use straight 30 weight oil or is the multi viscosity oil I use in my vehicle OK?

**A:** For best genset performance Onan recommends you use OnaMax™, the oil Onan specifically formulated for RV gensets. However, you can use the same oil you use in your vehicle engine provided it meets or exceeds SG/CE API specifications. Tests have shown that using a straight 30 weight oil (like OnaMax SAE30) may help reduce oil consumption. In fact, to get you off to a good start, all new Onan gensets are factory prepared with OnaMax. (See oil viscosity chart on page 26).

**Q:** Why is there no oil filter on my Onan MicroLite 2800 or 4000?

**A:** Modern engine technology results in lower oil temperatures and reduced contamination. This means that the oil lasts longer and lubricates better. Reduced blow-by results in very low oil consumption. Weight is also reduced by eliminating the oil pump and oil filter.

**Q:** I turn on my generator for about 5 minutes to make a cup of coffee, and then turn it off. A friend told me that this is not good for the generator. Why?

**A:** Our genset ideally should be run a minimum of about 30 minutes per session. That gives it a chance to warm up. Once warmed up, running your genset for five minute intervals should be fine. But remember to turn on some appliances to cause your genset to work while it's running. Your generator will run better and last longer if you exercise it.

**Q:** What can I do to prevent my genset from surging?

**A:** That's a complicated question that could have a variety of answers. See the section entitled "Preventing Surging" on page 10.

### Problem Troubleshooting

Under normal operating conditions, you can expect your Onan genset to perform reliably without any problems. But if a problem does occur you may be able to isolate the cause by using the following troubleshooting chart.

If you cannot discover and correct the problem, make a note of your genset model and serial numbers and contact your local certified Onan Service & Parts Dealer.

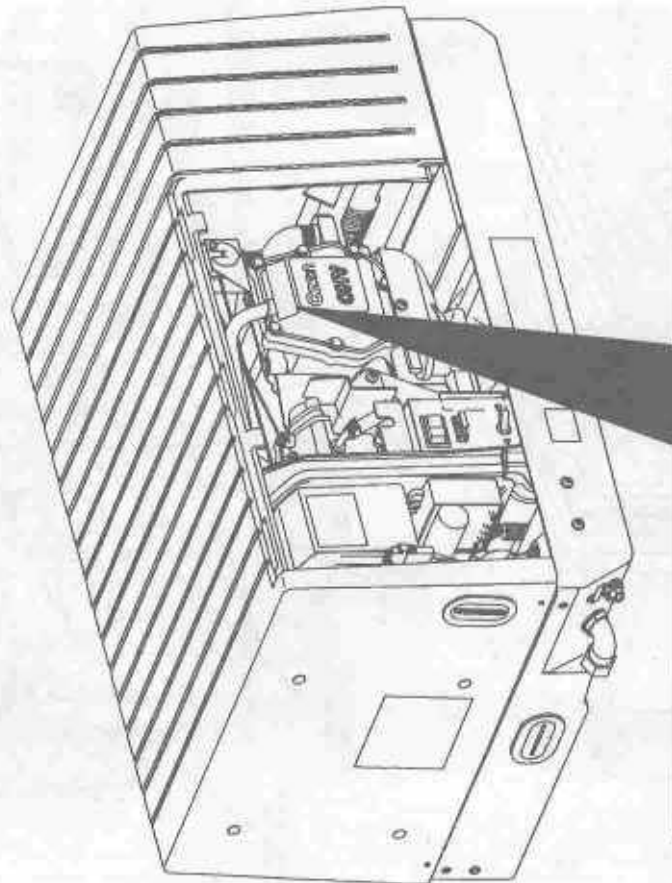
PROBLEM	PROBABLE CAUSE	SOLUTION
FAILS TO CRANK	<ol style="list-style-type: none"> <li>1. Low battery.</li> <li>2. Bad battery connection.</li> <li>3. Blown fuse.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check battery electrolyte level.</li> <li>2. Clean and tighten all battery and cable connections.</li> <li>3. Replace fuse on control panel.</li> </ol>
CRANKS SLOWLY	<ol style="list-style-type: none"> <li>1. Low battery.</li> <li>2. Bad battery connection.</li> <li>3. Oil is too heavy.</li> <li>4. Load connected.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check battery.</li> <li>2. Clean and tighten all battery and cable connections.</li> <li>3. Replace with lighter weight oil.</li> <li>4. Disconnect load before starting.</li> </ol>
CRANKS BUT WON'T START	<ol style="list-style-type: none"> <li>1. Fuel below genset pickup level in tank.</li> <li>2. Fuel supply shut-off valve closed.</li> <li>3. Carbon deposits on spark plugs.</li> <li>4. Low oil level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Add fuel.</li> <li>2. Fully open fuel supply valve.</li> <li>3. Remove spark plugs and replace.</li> <li>4. Add oil if necessary.</li> </ol>
EXHAUSTING BLACK SMOKE	<ol style="list-style-type: none"> <li>1. Rich fuel mixture.</li> <li>2. Dirty air filter.</li> <li>3. Choke stuck or misadjusted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn main fuel adjustment in 1/8 turn (counterclockwise).</li> <li>2. Replace air filter.</li> <li>3. Contact your Onan Service &amp; Parts Dealer.</li> </ol>
UNIT RUNS, THEN STOPS, OR STOPS WHEN DRIVING AROUND A CORNER	<ol style="list-style-type: none"> <li>1. Low oil fuel.</li> <li>2. Low oil level.</li> <li>3. Excess oil.</li> </ol>	<ol style="list-style-type: none"> <li>1. Refill fuel tank.</li> <li>2. Add oil if necessary.</li> <li>3. Reduce engine oil level.</li> </ol>
UNIT RUNS THEN SURGES	<ol style="list-style-type: none"> <li>1. Loose or worn spark-plug leads.</li> <li>2. Defective ignition coil, wiring or control components.</li> <li>3. Faulty spark plug.</li> <li>4. Governor out of adjustment.</li> <li>5. Combustion air prohibit malfunction.</li> <li>6. Carburetor icing.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check spark plug leads at spark plug and ignition coil.</li> <li>2. Contact an Onan Service &amp; Parts Dealer.</li> <li>3. Remove spark plug and clean or replace.</li> <li>4. Contact an Onan Service &amp; Parts Dealer.</li> <li>5. Contact an Onan Service &amp; Parts Dealer.</li> <li>6. Move carburetor pre-heater to the winter position.</li> </ol>
POWER SHUTS DOWN (GENSET CONTINUES TO OPERATE)	<ol style="list-style-type: none"> <li>1. Overloaded circuit.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn off some of the electrical load, and reset the circuit breaker.</li> </ol>

**WARNING!** Incorrect troubleshooting procedures can result in risks of property damage, or death from fire, explosion, electrocution, asphyxiation or being caught or hit by moving parts. DO NOT ATTEMPT troubleshooting unless you are trained and experienced in electrical and mechanical maintenance.

### III. GENERAL RV GENSET MAINTENANCE

#### Model Identification

Always use the complete model and serial number of your RV genset when contacting an Onan Service & Parts Dealer for parts, service or operating information. The model and serial numbers are printed on each unit's name plate (see illustration) along with the kilowatt rating.



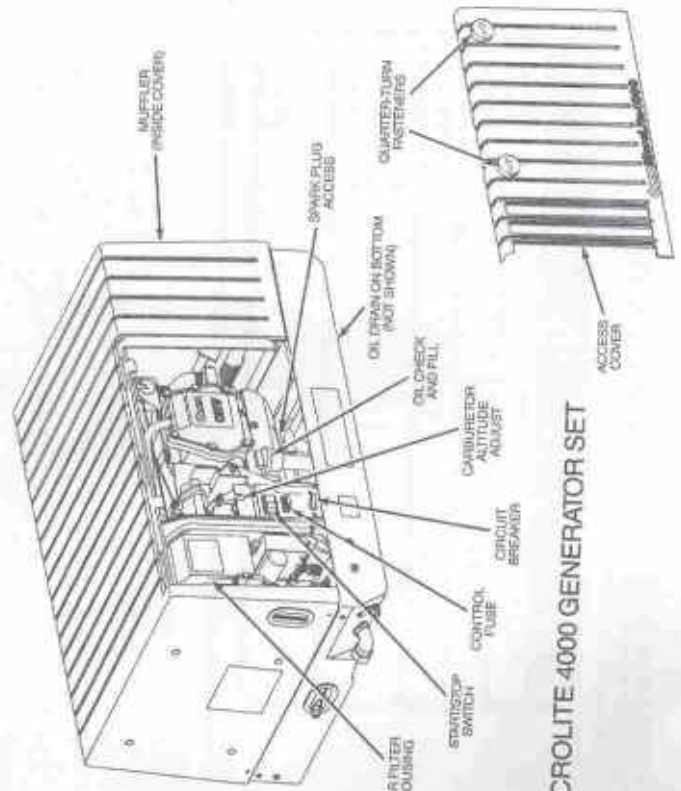
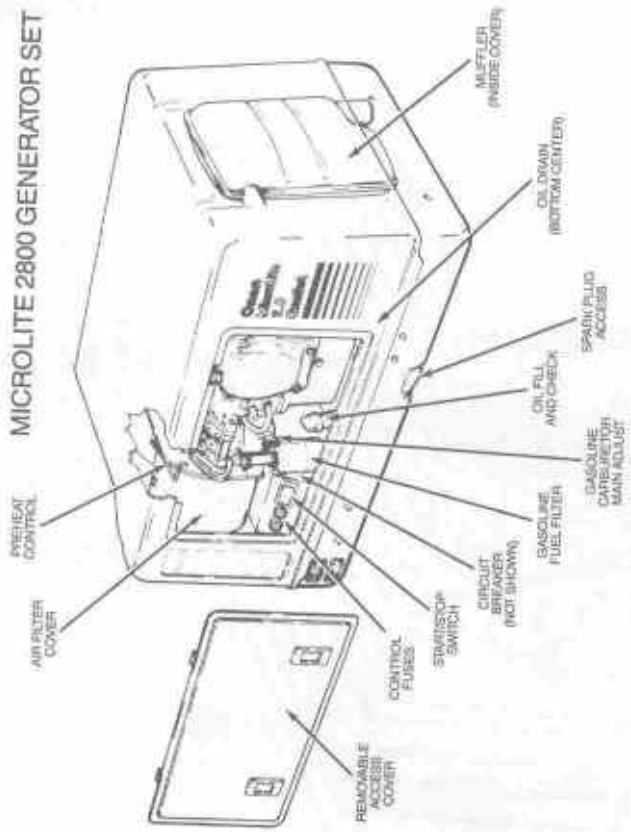
<b>Model No.</b>		<b>Ph:</b>	<b>kW:</b>
<b>Serial No.</b>		<b>PF:</b>	<b>RPM:</b>
<b>AC Volts:</b>		<b>Hz:</b>	<b>Bat: 12V</b>

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#### ONAN NAMEPLATE

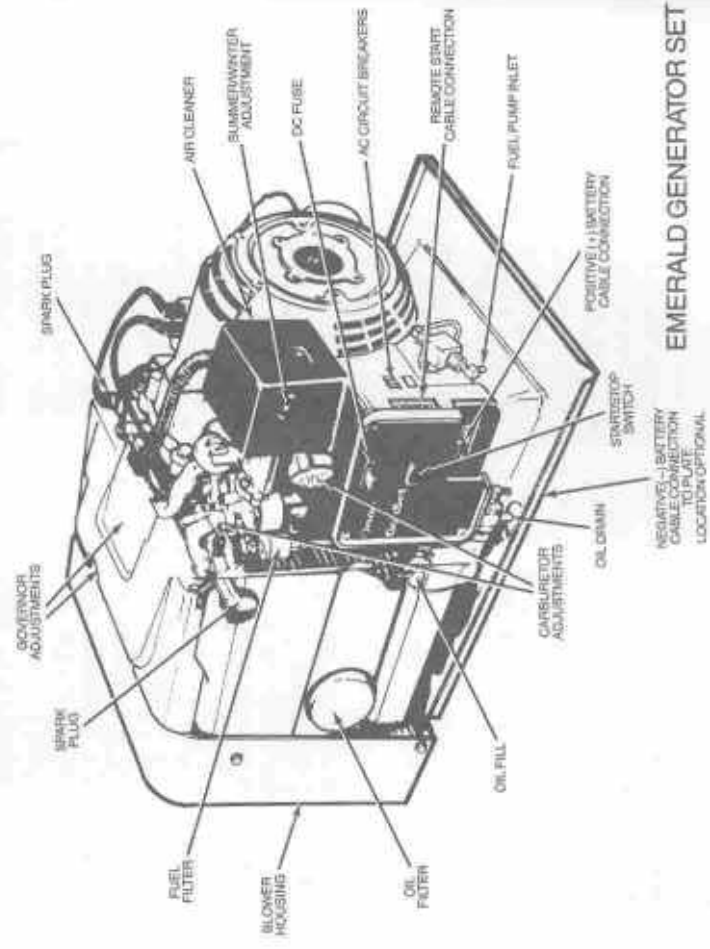
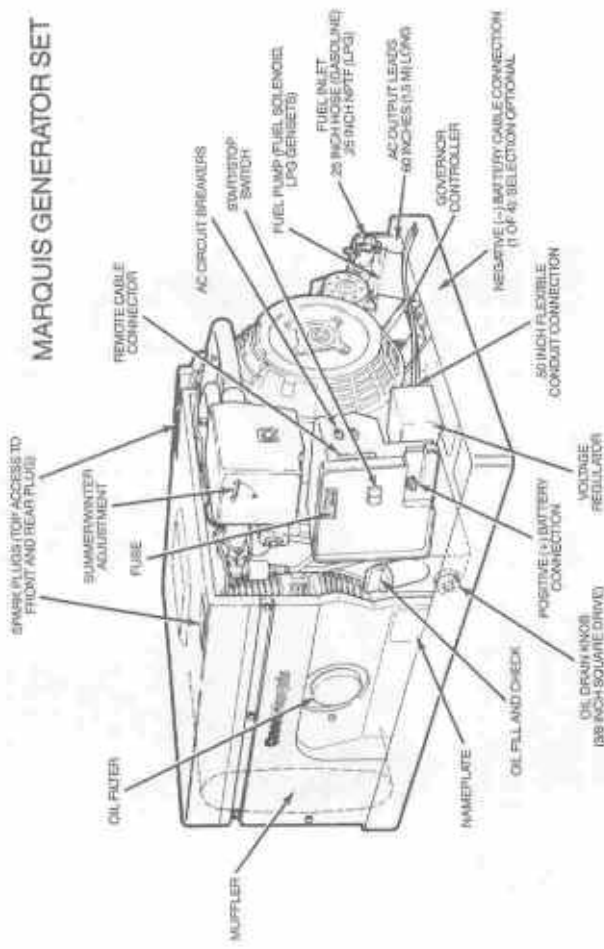
# Service Point Diagrams

## MICROLITE 2800 GENERATOR SET



## MICROLITE 4000 GENERATOR SET

## MARQUIS GENERATOR SET



## EMERALD GENERATOR SET