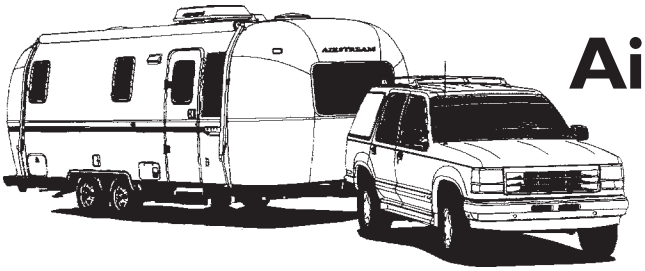

Airstream Tech Help Group

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This group has been established by WBCCI to help the membership with any of their technical RV problems. Examples of questions that might be of interest to many members will be published in the *Blue Beret*. We will respond directly to you, in response to your email or letter describing a problem you are having. We hope you will find this new service of value in the care and feeding of your RV. You may contact us as follows: techhelp@wbcci.org or by mail: Howard Lefkowitz, 11508 Colt Terrace, Silver Spring, MD 20902

Honda Generator Grounding

REFERENCE: *Blue Beret* Airstream Tech Help Group maintenance article (12/01/2009) 'The GFCI Mystery'.

"If you carry a Honda generator, you will find that it does not have its ground connected to the neutral. This is done so you can connect multiple generators to increase the total capacity. If you want to be completely safe, you should connect the generator ground to the neutral line. This will insure that your trailer will not be hot relative to a puddle of water. A simple jumper is all that is needed."

QUESTION: I read your article on "The GFCI Mystery" and found it very interesting, especially the last paragraph about Honda generators. I have a 1998 Airstream and a Honda Generator EU 3000is. The generator will power up but not run the micro/convection oven, but it will run all other appliances. Is my problem connected to what you wrote about???

I have had an electrician tell me I have 46 volts to the generator ground. When I plug in my "Ideal-Sperry G F tester" the 2 amber lights come on and the red light also comes on (should be only 2 amber lights). Does this mean I should be careful with the generator during a rain storm or standing water??? I have had three generator repair shops tell me the generator is OK but 46 volts to ground bothers me.

Tom

ANSWER: Yes Tom, you have a floating ground, which is why your tester's red light comes on. This is a dangerous situation and should be remedied before you use the generator again. The generator wiring is normal and is designed that way so two generators can be wired in parallel to get 6000 watts. The generator is fine. You should wire the neutral to ground at the generator and it will then test OK and not be a shock hazard. The 46 volts is not very much, but if you stand in a puddle you can get a nasty shock. Your trailer skin is also hot relative to the ground. If you look at your AC output receptacles, one of the holes takes a wider plug (check your male plugs) which is the neutral output of your Inverter. The smaller terminal is the hot side and is usually the white wire. I think your neutral wire may be red. There is no connection between the neutral output and the ground. One approach is to drive a ground rod into the earth and hook your generator ground to the rod. Most campers have no intention of ever adding a second parallel generator, so in this case I recommend a jumper be used.

Remove the panel screws so you can get to the back of the dual electric AC plugs. Using the screw terminals connect a jumper from the neutral to the ground terminals of the receptacles. Use at least #12 wire with the proper size terminal lugs. Remember this can no longer be paralleled to increase power, without removing the jumper. The voltage between ground and neutral will now be zero and your tester should light correctly.

The EU3000 should be more than enough to run your micro/convection oven. It should easily run your air conditioner although not necessarily at the same time. Even a large microwave uses less than 1500 watts. So you should have plenty of power. I do not believe the generator grounding has anything to do with the oven. However, start-up is a different animal. Your air conditioner can take up to three times as much current on startup. So if your oven is running and you turn on the A/C it may pop the breaker.

Does the air conditioner start and run OK on generator power? Do both appliances work on shore power at the same time? Start the air and let it run, then turn on the oven. Does this work on shore power?

If everything works OK on shore power, the air conditioner works on generator power but the oven does not. Check the wires on both the oven receptacle and its circuit breaker. It may also be possible the generator is not putting out its full rated 23.3 amps (25 amps max). Just because the service shops checked the unit does not mean they tested the output current capability. Good Luck

Howard

Surge Protector???

QUESTION: Greetings from lovely Rolla, MO. I am struggling with the need for a surge protector for my 2007 Airstream Classic. The struggle is do I need to part with $120 for one of these things or am I protected by my circuit breakers and fuses? If I <u>need</u> one do I get the permanent installation or the outside model. (I fear this would be an object of thievery.) I appreciate your expertise as always.

Hugh

ANSWER: Your circuit breakers and fuses provide no surge protection, however, in over 50 years of camping with trailers and motorhomes I have never found the need for an elaborate RV surge protector. Actually in one Canadian campground, a number of years ago, they had incorrectly wired one string of campsites and had 220 VAC on the outlets. Fortunately, we discovered it before anyone

hooked up to the sites. Back then each caravan had an electrician who pre-checked each campsite for correctly wired outlets. A surge protector would not have helped in that situation. The caravan committee did away with this a number of years ago, because it was rarely needed.

What I would suggest is to use inexpensive (indoor) surge protectors on any sensitive or expensive equipment you want to carry. For example your computer, HDTV or Amateur Radio Set. Virtually all of the campgrounds today have excellent power, which means you should not need any more protection than you would do at home. So save your money. You can get a single or multiple outlet protector for each circuit that will have sensitive equipment attached.

Some remote campgrounds can be found that have poor unreliable shore power, which is usually a problem in the heat of summer. Only an Autotransformer or using your own generator can help in this situation.

A good quality surge protector will cost in the $10 - $15 range. Don't waste your money on the under $5 units, which don't protect anything. Forget about a lightning strike as even the $150 units cannot protect in this event.

One item you should buy is an electric outlet circuit tester (5 or 6 dollars), which tells you if the neutral wire is connected to the correct outlet terminal and that you have a proper ground. This is available from many hardware stores. You simply plug it in and check the lights. It works for 30 amps by using a 20 amp adaptor. With an aluminum skin this is particularly important for an Airstream, especially in the rain.

Howard