


Wagner & Griswold Society

Online Forum: [Wagner and Griswold Forum](#)
Join Now: [Wagner and Griswold Society Membership](#)
Visit Us on Facebook: [Wagner and Griswold Society](#)
[WAGS Cast Iron Cooking](#)

-  **Electro problem** (Read 1852 times)
- Bob Cox**
Electro problem
Apr 22nd, 2011, 9:45pm
I don't know if I have a problem or not, because I am not sure what is normal. My electro tank is a 151/2 gal. kettle turkey fryer. My charger is a Sears Die Hard 2 / 40 / 200. Have a #9 Griswold Dutch oven in it right now. It is pulling 25 amps on low, and is bubbling like it is supposed to. Everything is working fine, but the cable on the negative (black) clamp gets extremely hot. Is this normal?
Posts: 285
The red (positive) cable is clamped to the SS tank. The black (negative) cable is clamped to a piece of 1/2 inch rebar, which is laying across the top of the tank. It is inside a piece of rubber hose. I cut a piece out of the middle of the hose. I have a short piece of cable the same size as on the charger, with clamps on both ends. I clamp one end of the cable to the middle of the rebar, and the other end to the piece being cleaned. Any suggestions? Any help and advice will be greatly appreciated.
Bob Cox
- Chuck Rogers**
WAGS member
☆☆☆☆☆
Re: Electro problem
Reply #1 - Apr 22nd, 2011, 10:59pm
Make sure the connection is tight. It not unusual for it to build heat. It's resistance caused from a not so clean connection. As long as the insulation on the cable isn't getting real soft, or melting, it should be fine.
Posts: 8632
- Bob Cox**
Re: Electro problem
Reply #2 - Apr 23rd, 2011, 1:51pm
Thanks Chuck. I will double check all connections. Also, I am going to go to Home Depot and get a piece of copper tubing, or rod to replace the rebar with. Will let you know how it works.
Bob
Posts: 285
- Bob Cox**
Re: Electro problem
Reply #3 - Apr 23rd, 2011, 7:01pm
OK Chuck,I did what you said, checked all connections, cleaned them til they shined. Also, removed the rebar, and replaced it with 1/2 " rigid copper tubing. Hooked everything back up, even put c-clamps on the cable clamps to make sure they were tight making good connections. Turned the charger on. It was really ginning, water roiling, charger pulling 25 amps. Within about 3 mins. The negative cable was already so hot I could hardly touch it. After 7 or 8 mins. it smoking, and I could smell the rubber insulation burning. I had to turn it off. I do not know what else to do to it. I just bought the charger last August, cleaned a few pieces with it, and did not use it anymore until about 3 weeks ago. It worked fine. Cleaned 5 or 6 pieces with it, and hooked it up, started to clean another piece, went into the garage to check it, and the cable was burnt into. Fixed it 3 times now. Can't cut any more off the cable. Ordered a new one from Sears. Should get it May 2. Don't know what else to do. Any suggestions, anybody?
Bob Cox
Posts: 285
- Chuck Rogers**
WAGS member
☆☆☆☆☆
Re: Electro problem
Reply #4 - Apr 23rd, 2011, 7:10pm
I just re-read the original post. You don't have any insulation between the re-bar, and the tank. You are shorting out the battery charger. If the now copper tube is contacting the SS fryer, that's bad. You need to put something between the 2 metal pieces so they don't make contact. If they are, that's generating the heat in your connection.
Posts: 8632
- Scott Sanders**
Moderator
☆☆☆☆☆
Re: Electro problem
Reply #5 - Apr 23rd, 2011, 8:15pm
Chuck, in his first post, Bobby said he put the rebar inside a rubber hose with a little section cut out for the negative connection, so, it shouldn't be shorting out.
Bobby, is there any chance that the cast iron is touching the stainless steel container somewhere under the soup?? How are you suspending the iron in the tank?? I don't know why the wire is getting so hot that it is melting the insulation, especially if you have checked to make sure the connections are tight. Try to put it on the 2 amp mode for a while. If it still gets that hot, I would say there might be something wrong with the charger. Have you tried to put the charger on a 12 volt car battery just to see how many amps it is pulling under normal use?? Maybe the amp gauge is not working properly. If the negative wire gets real hot while charging a battery, I'd take it off the battery real quick and maybe take the charger back to Sears and have them look at it. BTW, I wouldn't say what you are really using the charger for though 😊😊. If something is wrong, they should either be able to fix it or maybe replace it. Keep us posted on what you find out.
Scott
Posts: 1300
- Chuck Rogers**
WAGS member
☆☆☆☆☆
Re: Electro problem
Reply #6 - Apr 23rd, 2011, 10:22pm
I didn't read that part Scott. I stopped after seeing that the rebar was layed across the tank. I know my neg connection gets hot, but not enough to melt it. Good call on the iron touching the tank. I missed that part. He mentioned he's running it on low, so I assume that means the 2 amp setting. The thing that causes heat is resistance (ohms). Usually associated with a loose connection. Unless it's the charger like Scott mentioned. I would have it checked out, but again, like Scott mentioned, don't tell them what it's being used for. I think that may void any warranty. 😊
Posts: 8632
- Bob Cox**
Re: Electro problem
Reply #7 - Apr 24th, 2011, 8:57pm
Hey Scott & Roger, I had the charger on 2 amps when all this was going on. Had it on 40 amps for a while, and it was pulling over 45 amps. Anyway, after rechecking all connections, and there was no change, I decided to try one last thing.I took the # 9 DO out of the tank, and put a #11 Griswold bread pan in. Hooked up my small 10 amp charger. Same thing. Tried one more thing (2). hooked the big charger up again, but this time I hooked the negative cable directly to the piece to be cleaned, and put clamp and about 5 or 6 inches of cable under water. It has been on about 2 hours now, on the low (2) amp setting, and is pulling about 17 amps. The clamp and cable are cool as a cucumber. I can not explain it, but it is working.
Bob
Posts: 285
- Chuck Rogers**
WAGS member
☆☆☆☆☆
Re: Electro problem
Reply #8 - Apr 24th, 2011, 9:10pm
Just a word of caution about submerging the clamp. It will start to corrode, and eventually break. Not sure how long it will take, but it will happen.
Posts: 8632
- Bob Cox**
Re: Electro problem
Reply #9 - Apr 25th, 2011, 8:33pm
Called Sears today, told them I was having a problem with my charger. They told me to bring it in to the store where I bought it, and if it was under warranty, they would just give me another one. I will take it in tomorrow, weather permitting. We have been having severe thunderstorms and tornados around here for 3 days now. Will keep informed.
Bob
Posts: 285
- Bob Cox**
Re: Electro problem
Reply #10 - Apr 25th, 2011, 8:36pm
Hey Roger, thanks for the tip about submerging the clamp.
Bob
Posts: 285
- Scott Sanders**
Moderator
☆☆☆☆☆
Re: Electro problem
Reply #11 - Apr 25th, 2011, 8:52pm
Bobby...Hopefully it is still under warranty and they give you a new one. It just shouldn't be getting that hot, especially on the 2 amp setting, and it shouldn't be pulling that many amps on the 2 amp setting. Keep us posted.
Scott
Posts: 1300
- Chuck Rogers**
WAGS member
☆☆☆☆☆
Re: Electro problem
Reply #12 - Apr 25th, 2011, 10:39pm
The only other reason I can think of, why it would be pulling so many amps on the 2 amp setting is the amount of Washing Soda you have in the water. If the new one does the same, try diluting the mixture a bit.
Posts: 8632
- Gene Dietzenbach**
WAGS member
☆☆☆☆☆
Re: Electro problem
Reply #13 - Apr 25th, 2011, 11:59pm
I agree with Chuck, there may be to much washing soda. But I have also found that if the piece I am cleaning is very close to the sacrifice piece it will pull alot of current. If I am cleaning a piece for several hours, I have to splash water onto the negative clamp and when I do it will hiss because it is so hot. I thought this was normal and I have been doing it this way for almost a year.
Posts: 1138

Chuck Rogers
WAGS member
★★★★★

 **Re: Electro problem**

Reply #14 - Apr 26th, 2011, 12:36am

The #9 DO that he's cleaning, the diameter of the tank, and the concentration of the mixture may all be playing into this overheating issue. The way it sounds, the piece is pretty close to the sides of the tank.

Posts: 8632

Ed Allspaugh
WAGS member
★★★★★

 **Re: Electro problem**

Reply #15 - Apr 26th, 2011, 8:55am

Quote from Chuck Rogers on Apr 26th, 2011, 12:36am:

The #9 DO that he's cleaning, the diameter of the tank, and the concentration of the mixture may all be playing into this overheating issue. The way it sounds, the piece is pretty close to the sides of the tank.

I totally agree. I've had a many set ups since 2002. The smaller set ups with large iron to clean pull many amps and heat up quick.

You can start fresh and add electrolyte and watch the amp hand increase as you add electrolyte. That was proven with the small demo set up I had 04 convention. Me I'd look into constructing a larger set up. Thats my 1/2 cents worth.. 😊

Bob Cox

 **Re: Electro problem**

Reply #16 - Apr 26th, 2011, 11:12pm

Quote from Chuck Rogers on Apr 25th, 2011, 10:39pm:

The only other reason I can think of, why it would be pulling so many amps on the 2 amp setting is the amount of Washing Soda you have in the water. If the new one does the same, try diluting the mixture a bit.

Hey Chuck, I thought about that last night. Looked at the article from WAGS that I went by when I first set up my electro tank, and it said only add water for whatever evaporates, as the sodium carbonate will stay suspended. I thought, dang, I bet that is the problem. When I first set it up, I put 1 TBSP of sodium carbonate per gallon of water. Everything worked fine. After winter I started back to using it I added some more water. After running all night, the water level would be an inch or two. I would add more water. Every time I added water, I added more sodium carbonate. Any way, took the charger back to Sears today, and thy gave me another one, no charge. By the way, they told me, they do not repair, or work on battery chargers. If it is under warranty, as mine was, they just replace them. So, I have anew charger, dumped the SS tank, cleaned it refilled it with clean water, and the correct amount of sodium carbonate. Will try it out tomorrow Will let you know how it works. Thank again.

Bob Cox

Chuck Rogers
WAGS member
★★★★★

 **Re: Electro problem**

Reply #17 - Apr 26th, 2011, 11:19pm

I think they may have nailed it. Since the concentration increased with each addition of electrolyte along with the water, the solution is able to carry more amperage, and will do just that. Can't wait to hear the results.

Posts: 8632

Bob Cox


 **Re: Electro problem**

Reply #18 - Apr 26th, 2011, 11:22pm

Hey Ed, I would like to have a larger tank, but when I did this tank, I could not find a bigger one. I need one about 22 inches X 26. Maybe I will find one sometime. Thanks for the info.

Bob Cox

Bob Cox

 **Re: Electro problem**

Reply #19 - Apr 26th, 2011, 11:31pm

Quote from Scott Sanders on Apr 25th, 2011, 8:52pm:


Bobby...Hopefully it is still under warranty and they give you a new one. It just shouldn't be getting that hot, especially on the 2 amp setting, and it shouldn't be pulling that many amps on the 2 amp setting. Keep us posted.

Scott

Hey Scott, Yes, It was still under warranty. I just bought in August of last year, and it was warranted for 3 years. Hopefully, I think we have figured out what the problem was. Will try it out tomorrow, and let you know how it works. Thanks for all the help.

Bob Cox

Scott Sanders
Moderator
★★★★★

 **Re: Electro problem**


Reply #20 - Apr 26th, 2011, 11:41pm

Glad to hear that Bobby.....What did they say when they saw there wasn't much left of the negative lead.. 😊😊😊

Hope they didn't ask what you were doing with it 😊 I think starting over again with the right electrolite concentration is a good idea. Also as has been mentioned, try not to get the DO too close to the sides of your tank. If you are going to do large items, you will probably be wanting to find a bigger container. Tell us if the fresh set up works better. BTW,...you should be able to use the 40 amp setting without any problems....assuming all the other conditions are right.

Scott

Rick Gilley
WAGS member
★★★★★


 **Re: Electro problem**

Reply #21 - Apr 27th, 2011, 8:12am

bobby, I set mine up in a plastic 55 gallon barrel.

Posts: 3649

Bob Cox


 **Re: Electro problem**

Reply #22 - Apr 27th, 2011, 9:09pm

BINGO. Hey guys, I got the new charger hooked up to tank with clean water, and the proper amount of washing soda. Been on now almost 6 hours. Pulling 12 amps on low, 20 on high. Water is roiling, and cables & clamps are cool, no heating. Working perfect. And that is with the # 9 DO in there. Thanks to all you guys for your & suggestions.

Bob Cox

Bob Cox

 **Re: Electro problem**

Reply #23 - Apr 27th, 2011, 9:17pm

Quote from Scott Sanders on Apr 26th, 2011, 11:41pm:

Glad to hear that Bobby.....What did they say when they saw there wasn't much left of the negative lead.. 😊😊😊 Hope they didn't


ask what you were doing with it 😊 I think starting over again with the right electrolite concentration is a good idea. Also as has been mentioned, try not to get the DO too close to the sides of your tank. If you are going to do large items, you will probably be wanting to find a bigger container. Tell us if the fresh set up works better. BTW,...you should be able to use the 40 amp setting without any problems....assuming all the other conditions are right.

Scott

Hey Scott, they didn't ask, and I didn't tell. Everything is workig fine now. Will try to get a bigger container when I can.

Bob Cox

Bob Cox

 **Re: Electro problem**

Reply #24 - Apr 27th, 2011, 9:21pm

Quote from Rick Gilley on Apr 27th, 2011, 8:12am:

bobby, I set mine up in a plastic 55 gallon barrel.

Hey Rick. What do you use for your anode? Thanks

Bob Cox

Chuck Rogers
WAGS member
★★★★★

 **Re: Electro problem**

Reply #25 - Apr 27th, 2011, 9:31pm

Good news Bob. I would run it on the higher setting, and pull the 20 amps. That's about the optimal amount. 25 would be about max. After that, it's just a water heater, and not cleaning any better.

Remember, if you put something smaller in, it will pull less amps on the same settings. It will still clean though.

Now don't forget the pics. After all this, we wanna see the results

Bob Cox

 **Re: Electro problem**

Reply #26 - May 7th, 2011, 7:42pm

Hey guys, here are some pics after cleaning and seasoning the pieces that were in the electro tank when I was having problems. These pics are after you guys helped me to get my electro up and running.

Bob Cox

 [DSC00191.JPG](#)



Bob Cox

Posts: 285

Re: Electro problem

Reply #27 - May 7th, 2011, 7:43pm
Pic 2

 [DSC00201.JPG](#)




Bob Cox

Posts: 285

Re: Electro problem

Reply #28 - May 7th, 2011, 7:45pm
Pic 3

 [DSC00211.JPG](#)




Bob Cox

Posts: 285

Re: Electro problem

Reply #29 - May 7th, 2011, 7:46pm
Pic 4

 [DSC00223.JPG](#)



Bob Cox

Posts: 285

Re: Electro problem

Reply #30 - May 7th, 2011, 7:47pm
pic 4

 [DSC00304.JPG](#)



Bob Cox

Posts: 285

Re: Electro problem

Reply #31 - May 7th, 2011, 7:50pm
pic 6

 [DSC00318_001.JPG](#)



Bob Cox

Posts: 285

Re: Electro problem

Reply #32 - May 7th, 2011, 7:51pm

Pic 7

 [DSC00328_001.JPG](#)



Bob Cox

Posts: 285

Re: Electro problem

Reply #33 - May 7th, 2011, 7:54pm

pic 8

 [DSC00244.JPG](#)



Bob Cox

Posts: 285

Re: Electro problem

Reply #34 - May 7th, 2011, 7:56pm

Pic 9

 [DSC00263.JPG](#)



Bob Cox

Posts: 285

Re: Electro problem

Reply #35 - May 7th, 2011, 9:29pm

Sorry I didn't have any before pics. The pieces were in the lye tank all winter, and I didn't have a camera when I put them in there. That problem has been taken care of.

Bob Cox

Chuck Rogers

WAGS member




Posts: 8632

Re: Electro problem

Reply #36 - May 11th, 2011, 9:50pm

Nice cleaning work Bobby. Seems like you have that electro working just fine now. I have to ask one question. Did you oil the pieces after you took them out of the oven the final time? They look a little dry. At least in the pics they do. Maybe it's just me. A final oil, and wipe will bring the dark color out, and leave a nice shine to the piece. Something like this:

 [01_001.jpg](#)



Bob Cox

Posts: 285

Re: Electro problem

Reply #37 - May 12th, 2011, 9:15pm

Hey Chuck. No I didn't oil them after the last seasoning. I guess I missed something in all my reading on the WAGS web site. I didn't know I was supposed to. Wondered why mine didn't shine, or look as black as some others. Do you let them cool completely down before oiling them? I use solid Crisco for seasoning. Would that be alright to oil them

with, or would Crisco oil be better? Thanks for the advice. It is really appreciated.

Bob

 **Chuck Rogers**

WAGS member



Re: Electro problem

Reply #38 - May 12th, 2011, 10:08pm

I always oil my iron while it's hot. You need to carbonized the oil, and that can only happen with heat. I oil right out of the oven, then let them sit for about 15 minutes, and wipe them down really well.

The choice of oil is up to you. There are alot of people that use alot of different oils. Find what works best for you, and you got it made.

Posts: 8632