



Multimedia & Software

Do It Yourself Service & Information

Bissell Little Green

with Pro Heat and Turbo Brush

Service & Repair

by

CopyCat



In The Bedbug War; This Is My Weapon Of Choice!

Tourists and travelers stop at the Big Apple by the millions every year, and now NY has an epidemic on their hands. Everybody i know has heard of the bedbug problems hitting the northeast (mainly New York). The problem isn't just there, but nearly one half the country. Anybody who has a tourist or vacation spot is open to these pesky blood suckers. They are in the "flea & tick" family, and are NOT common to the US. They are most prevalent in Europe and the Eastern countries. They came here in duffel-bags, travel cases, and even luggage.

Before WWII (world war 2) the United States had NO bug problems, and was considered to be the cleanest living anywhere on the planet. Well, maybe not the cleanest, but certainly the best place for no bedbugs! After WWII, the US government banned the use of DDT (dichlorodiphenyltrichloroethane), and ever since then, the US people have had to rely on bug control companies and other people that placed a required license and or permit to use pesticides.

We have the US government to blame for this and the corruption of some pest control companies. Licensing and permits are the only way you can get some of the chemicals needed to battle these bugs; and especially in some states like NY.

In some states, there are few restrictions on the chemicals needed to kill these nasty suckers. The desert Southwest (where i'm at) has never seen a bedbug, and the words just seem to be from some sort of 'bed-story' that our mothers told us to keep us happy..."don't let the bed bugs bite!". The only thing i ever heard of was; fleas (but we don't have any, or at least i never seen one), and of course ticks, (we have 'tree-ticks' they suck sap from baby trees).



I never thought i would go looking for bug-spray other than the average "raid" or whatever, and found that bedbugs are rare to the West (let alone the US) and the chemicals needed to kill them ARE available in Nevada. Some of these chemicals can be found everywhere. For example, my local Walmart has (3) different places within the store to obtain a selection of pesticides and chemicals needed to tackle the bedbug problem.

* Pet Supplies - I found several different selections for killing fleas and ticks. From Sprays to Powders. ie.. Hartz Flea & Tick Carpet Powder was the best bet if you wanted a powder or pet-bed spray that wont hurt anybody. NOTE: the max percent of pyrethrin in the pet and carpet powder was only 0.075% (seven hundredths of a percent) which aint much, but enough to kill bedbug's eggs and larve. (pets are one of the leading carriers of these excellent 'hitchhikers')

* House and Supplies - at this part of the store i found the Raid flea and tick bombs, and even bedbug bombs and sprays. The best boom for your buck is the "Fumigator" which uses a 'smoke' to disperse the chemicals (much like a spray/fogger but it uses smoke). The fumigator is the most powerful delivery system for mass areas (about 12%), and is nearly dangerous and requires the user to put the whole thing in a bowl of water before you ignite it, plus it leaves a residue that may harm pets and kids if ingested (read the instructions carefully!)

* Lawn & Garden center - this part of the store was the best...it had all the high-end chemicals in concentrate (Permethrin/Pyrethrin 2-3%) for the battle because, you get the chance to make the mixture yourself...the concentrate i found for my home was; Ortho, and it contained almost 3% permethrin (which is actually 65% chemical and 35% ionic solution). Basically, you only need 1% of Pyrethrin to treat a home or small garden.

For safe indoor extermination of these things, some are using (Pyganic Dust) powered, or finely crushed seashells which is like fine glass. (it cuts into them as they move across it). It seems though; there is nothing better than the lawn/yard sprayer concentrate. You don't have to have a yard or lawn to use the stuff, just mix 1 cup (or atleast 6oz.) to a Gallon of water, for a strong 'get started' solution.

Get a GOOD spray bottle, or a 'hudson sprayer' (the big canister lookin kind that you pump up and can walk around with...like professionals use). The concentrate mixture can be reduced after a few weeks to about 12 to 1 (twelve parts water to one part of chemicals...or about 1/2 a cup of concentrate to a gallon of water).

You'll need to extend your monthly budget for these chemicals and should be prepared for 10-12 weeks of treatments, increased laundry, and regular cleaning for atleast 2 or 3 months. Daily vacuuming and cleaning is good but it doesn't give the powder a chance to work. Just clean your living areas and bedrooms 2 or three times a week, and spraying Alcohol (91%) all over the pet-bed and their laying area (couches and chairs as well) will be your best bet to get a good start. It seems Alcohol and Flea/Tick powder is what should be used for lasting action (the alcohol kills them on contact). The Flea & Tick powder should be used everywhere, and it works best if you leave on the rugs for days before vacuuming it up.

Empty your vacuum cleaner or bags after every cleaning, and be sure to wash your hands often when treating areas with these chemicals. Most pets and kids are safe from the powder, and there is no heavy odors like other bug sprays we all know use (ie. Raid.etc.) (actually; some fresh scent like 'flowers' is always added to the rug powder)

This next part of this story is the 'refurbishment' of my Bissell Little Green - Pro Heat steam cleaner. It was purchased several years ago when it first came out, and has been my best friend for some time now... The unit has a few drawbacks; it leaks (alot) and the 'flash heater' plus the pump gets clogged after several uses from using tap water instead of filtered or purified water.

I have modified my Bissell Little Green with a On/Off spray trigger, and an improved 'turbo brush' washer. The first part of this mod is the trigger, and last part of the mod is for the turbo brush. I also address some of the things I found along the way. Also included is the wiring diagram for the thing.



Refurbishing The Bissell Little Green With Pro Heat and Turbo Brush

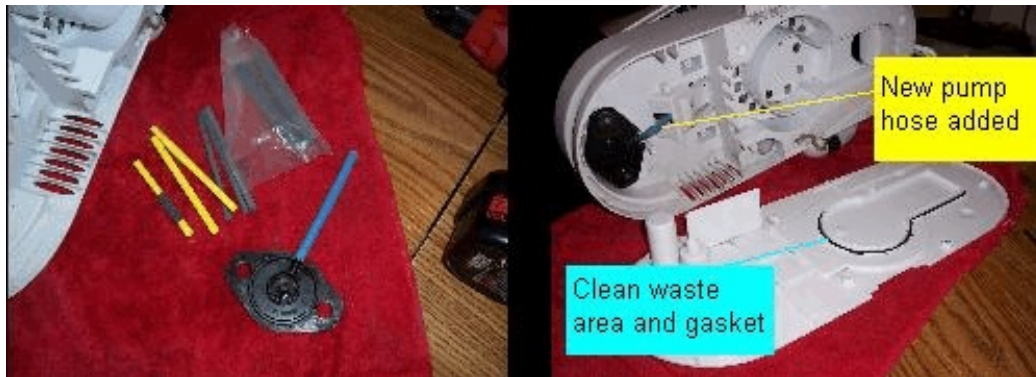
The first thing you need to do is disconnect the power and empty all clean water/solution and waste from it's reservoir. Just tip it on its side Don't throw out any clean water (if any) you'll need it for testing later.

Second, get a phillips screwdriver and a pair of needle nose pliers. You'll have to lay it down to get to the leaking issue. Remove all the screws on the bottom-plate.



After removing the screws from the bottom area, you'll notice it just drops flat to reveal a large

flat (thin) gasket that needs to be flush with the housing. The gasket provides the vacuum to the waste tank, and it should be cleaned and put back just the way you see it here.



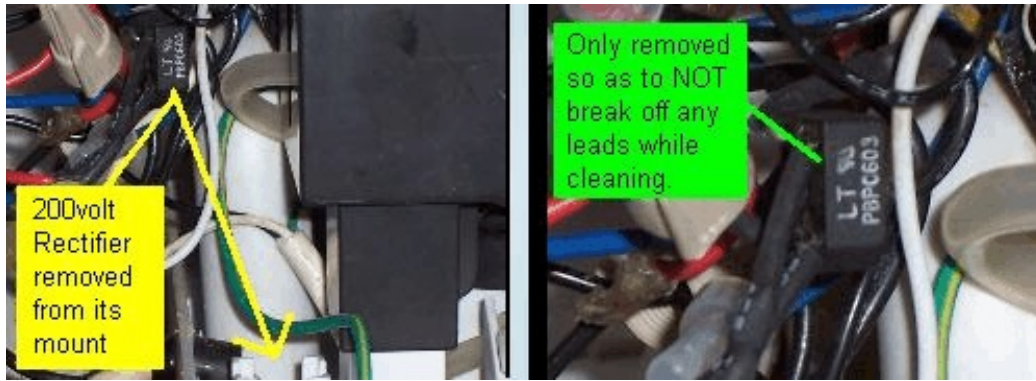
With the bottom removed we can get to the clean water/solution leak problem. The clean water tank (and pump) require an 'airtight' seal for it work good (or spray good). Here you can see the hose replacement I made. (its actually is a peice of 'shrink tubing' for wires because thats all i had). You might be able to find the size of hose at your local fish/pet supply store, but you'll have to buy atleast a foot of it. (we only need about 2 inches)

Once you examine the fittings for 'possible' leaks, make sure the new or old hose is in good condition and not cracked, split, or ripped anywhere. They used regular 'zip-ties'for the hose's clamps, and you might want to do the same or use something from the fish/pet supply store for hose clamps. Make sure everyting is clean around the waste vaccum area, and that the thin rubber seal is fairly seated correctly. You can use a little WD40 on your rubber or use a light grease like vaseline when you are ready to close it up. Don't close it up until you have made sure the clean water pump hose is finished or in good shape.



Next part details some of the changes i made to the trigger. Here you can see i put a small push-ON switch (normally open) inside the area where the original hose valve was. The switch is wired to the pump which allows me to controll the pump spray. This also should extend the life of the pump, and should not have to work so hard. I also had to remove the entire hose valve assembly in the handle inorder to get the switch to fit. then cover the switch entirely in silicon.

While inside the handle, check the hose there, because it too leaks badly. Check the clean water hose at this end for breaks or rips or tears. If you must; cut a little off the end to make a new fitting, and add a new zip-tie or clamp to fix it. If your hose here is NOT damaged but just 'crimped' from being not used for a period of time, then it should be good to go. (i had to remove everything, the crimp was just too bad).



Wire your switch with a mini line of 2-wire leads, and run it down the length of the hose to the inside pump. There you can tap into the '+' (red) wire that goes to the pump. The pump is 12volts DC, and its power comes a 200volt Bridge Rectifier located on the inside area between the AC vacuum blower and the heater/pump assembly.

You will have to unscrew the rectifier from its mount one screw in the middle holds it in place. (If you don't you might break a wire lead while working on the heater or just moving wires around). Make sure you have the unit unplugged at this point, and then give everything a good cleaning.

On mine, i had to replace the pump motor just after 1-2 years of service The new pump motor i found came from an old 'electric broom' (9-12volts). It was a perfect fit, but it is a 9volt motor, and using the 12volts from the rectifier was too much...so i added a 9vdc power transformer to the machine.



Now with the added switch and the replacement hose, all that has to be done is check the heater and the rest of the rubber stuff found elsewhere on the machine. I found that there are several 'o-ring' washers used that might be the cause of leaks. Here you can see the handle's washers (2) 1/16th o-rings, and (1) 1/2 inch or 5/16ths on the clean water tank. These are good to go on mine, but some may want to replace those on the handle to stop the leak.

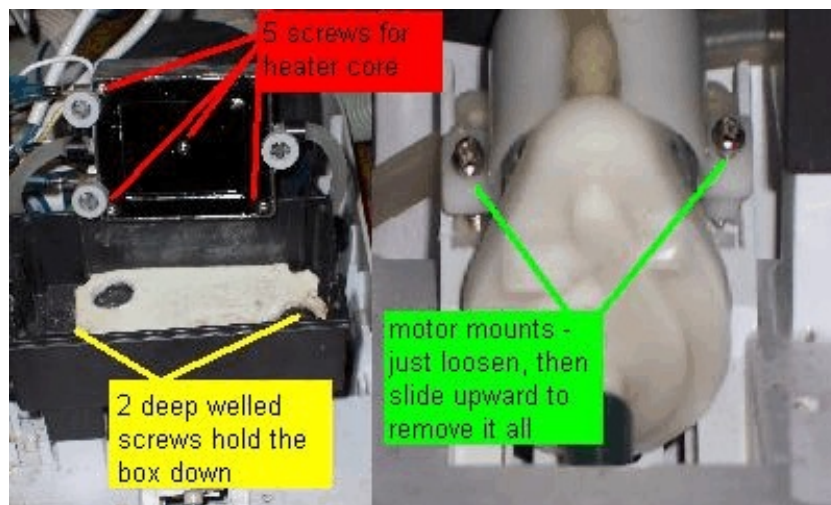


I found a variety of O-Rings at my local hardware store, and bought some just incase i need them later. If you get the chance; do the same. If you can't afford it right now, just use some vaseline on the old ones...it should help.

Notice the clamps installed on the hose(s) coming from, and going to, the heater box. These hoses should be clean and cleared. You can use the needle nose pliers on these clamps, and remove them, just make sure they are put back 'on' the hose before you close it back up.



Here you can see the heater and pump assembly, remove the screws at the top of the black box, then inside, and down you'll find 1 screw on each side. Only 2 screws hold the heater box down (on top of the water pump). These screws need to be removed if you intend to replace or fix the water pump. After you have the heater assembly removed, check for leaks again at the hose ends. To replace the water pump, just loosen the 2 screws at either side of the motor (they don't have to be removed, just backed-off enough to 'slide up' the motor housing and pop it out. (thats why we had to remove the heater assembly)



If you need to clean everything from using ordinary tap water, just use a solution of 50% vinegar and water, and let it sit for a few hours. If that don't work try soaking it in a mild solution of CLR (calcium, lime, rust) remover. The heater I'm afraid requires a bit more.

For cleaning the heater; remove the screws located underneath (5), and be careful not tear or stretch the gasket inside while separating the cover. I mine, i found that the water damaged a spot in the corner of the cover-plate, and i had to solder it. Using ordinary 'tap water' is truly the worst thing for this machine. If you can; only use purified or at least filtered water.



Looking inside the heater; you can see the build-up of alkali, calcium, and old soap. This is only from a couple uses and then stored for a few months. The build-up is a total 'clog' and no water can move through the heater until it is cleaned. I use a little CLR here, and then some 'fine' 400 sandpaper to touch up the grooves where the gasket fits.

After cleaning the heater (and cover), i mounted the gasket and coated everything in a thin layer of vaseline or grease. I put the hose clamps on and closed it up. Next, after you fit everything back into place (wires and rectifier) and double check everything. Close it back-up and make sure you don't 'crimp' any wires or hoses during the process.

Then make sure you greased all the rubber (the waste tank, the waste tank's seat where you put it down on the machine) and the clean tank and it's seat where it fits into the machine. Also note that; in order to get the pump working right you are gonna have to 'prime' it. That means sometimes letting it run until it catches water instead of 'air', or you can suck the air out of the line from the handle's end (much like syphoning gas from car's tank) but that's pretty hard even if you do have supper lungs and magical lips.



When its time to refill the clean water tank, make sure you have left over water already in the tank's seat area, and that it is full and no air in the line so you don't loose your syphon power. (whatever you do; don't hit the trigger until you have a fresh tank of water back in its place)... Here (fig.) shows the water is almost like a little water bubble. If you do this right, your sprayer will work all the time you the trigger.



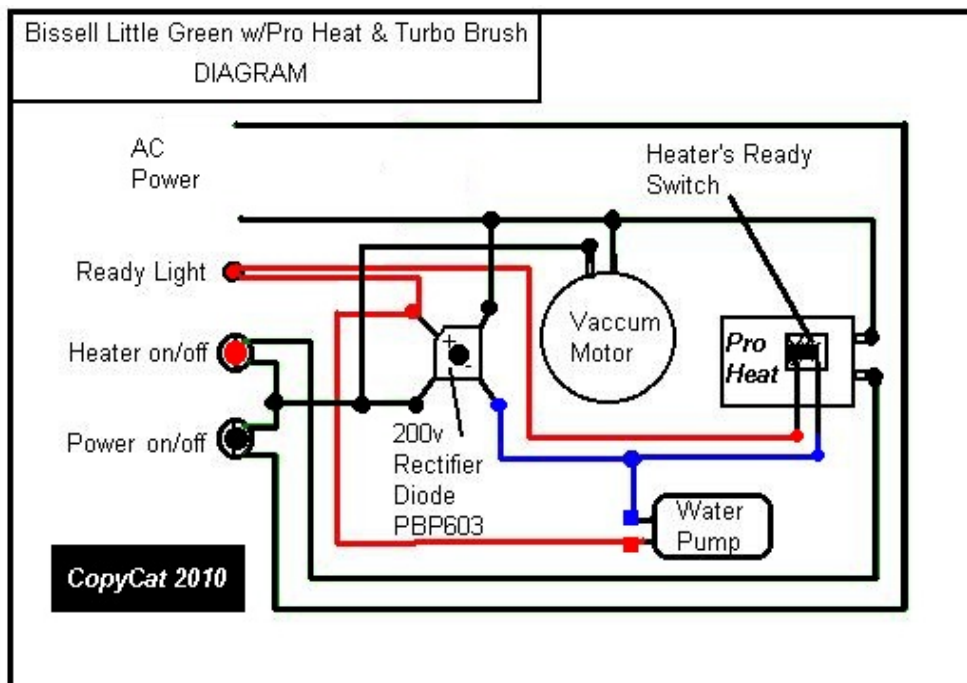
Once you have closed it up; turn it on and test it. You should have steady stream (about 12" inches) shooting out the handle when no brush is attached. There seems to be no problems with it when its working right, and sometimes all you need to fix it when it stops spraying is; a small thin wire to clear the tiny little spray hole located on the brushes. (i use a section of guitar string, or a new lead from a diode or resistor to clear the obstruction in the hole Or you could use a blast of air if you got it.)



The turbo brush mod is just a fix. I used the white little rubber/foam disc i get when i open a new package of blank discs (CDs or DVDs). The turbo brush i have had a little air leak around the brush shaft. All i had to do to use the new foam/rubber seal, was to trim a little off the edges before i remounted the brush bar. Now it has a good seal, and the turbo part works great!

That's It! Good Luck!

-CopyCat '10



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