Lubricating Gears & Re-Sealing Mini Jet Pump

Tools required: Philips screwdriver, small flat screw driver and/or pen knife. Petroleum jelly.
1. Remove four screws located around the black front face of the pump. If you lay your filter on its back, looking down at the pump, it will be easier to work.
2. Inside you will find a black plastic piece (looks like a top hat) sitting on a spring. The spring is set into an oval black plastic piece. (Set these pieces to the side.)
3. Next you will see a black rubber oval gasket. With a small screw driver or pen knife along the edge, lift it out and set it to the side.
4. Next is an oval stainless steel plate which needs to be lifted out. Note: this thin plate may be lifted out when you lift out the oval gasket. If you do not see it look on the back of the gasket, as it may be stuck to it. There are two separate pieces.
5. THIS NEXT PART IS VERY IMPORTANT: Everything now is a beige colour. Looking carefully in the middle of the pump you will see the drive gear in the shape of an "8". You should also see a mark, either black or red, on the top of the "8", and a mark in the middle like a pin hole. There are two slots on either side of the figure "8" plate. Take this piece out and set it down in the exact manner as you removed it. Same face up and same holes corresponding.
6. Once this plate is out you will see the gears. First remove the bottom gear by using a small screw driver. Place the screwdriver between the teeth of the gear and pull upwards. Set the gear to the side. Next do the same with the top gear. This is your drive gear. When you remove it look through the hole, you will notice a flat spot. This lines up with the flat spot on the silver shaft that you just removed it from.
7. Take some petroleum jelly and place it on the back of the DRIVE GEAR and a little in between the teeth of the gear. Line up the flat spot on the shaft to the one on the inside hole of that gear and put it back in. Make sure the gear inserts fully.
8. Do the same as above to the other gear (idler gear) and place it back into the pump. The hole is round and you do not have to line anything up, just make sure that the two gears are even.
9. Pick up your figure "8" plate. Put a film of petroleum jelly on the back of this plate. Place it back into the pump in the exact same way you removed it. The mark on the plate should be at the top facing you and the pin mark should also be face up.
10. Put a small amount of petroleum jelly on your finger and run your finger along the top of the figure 8 plate you just put in. You need to fill in the crack where the plate meets with the rest of the pump housing and the two holes where the shafts are (not the two side slots).
11. Next replace the silver oval disc. There is a tiny raised area, and this plate fits perfectly in the middle.
12. Place the rubber oval gasket over the silver plate. Make sure it is seated properly or your pump may leak.
13. Take the oval hard black plastic piece and place it in the middle on top of the gasket. Place the spring in the middle (you will notice a raised area that the spring fits into). Next place the "top hat" looking piece on the top of the spring. The long portion inside the spring.
14. Put on your cover and the 4 screws. Make sure you do not over tighten the screws.

If you have any questions about the above instructions, please contact Buon Vino Manufacturing, Inc. at 519) 622-1166, or by e-mail to peter@buonvino.com.