

Re: how to replace laptop fan?

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- *From:* Allan Adler <ara@xxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* 19 Jun 2007 00:47:17 -0400
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Allan Adler <ara@xxxxxxxxxxxxxxxxxxxxxx> writes:

I still haven't removed the fan but will do so soon.

The person who gave me the laptop suggests that, before replacing the fan, I make an effort to determine whether it is really the fan that is defective or the logic that controls it. Specifically, he suggests that:

- (1) It is probably a DC fan and probably runs on the exact DC delivered by the power supply
- (2) It should therefore be safe to try to run wires from the power supply to the fan to see if it spins.
- (3) If it does spin, the fan might just need a cleaning.

I don't think I have any documentation for the laptop. Anyway, this evening I successfully removed the fan. Then I considered the possibility of running the fan from the power supply. The 3 fan wires are red, blue and orange and terminate in a tiny connector that plugs into a matching socket somewhere under Part A. It didn't seem very feasible to try to feed wires directly into the socket, but maybe it can be done. Anyway, I plugged it back in.

With Part A removed, the usual power button is gone but it was easy to find the button under Part A that the power button really pushes. So, I tried to push it and run off the battery to test the fan. Nothing happened. I considered the possibility that the laptop has some way of knowing whether Part A has been removed. I looked around and found something I could push. I think it was just something that gets pushed by something that gets pushed when the laptop is closed, hence is irrelevant; anyway, it didn't help. I couldn't turn it on.

I decided to look at the fan more closely. I removed three screws that held the fan itself in its case and then easily removed the fan. Inside the case were three little pieces of some kind of fluffy material that I first thought were dust bunnies, but now I think they used to be a single piece of some kind of thick matting that sat in a particular place in the fan casing and got shredded and dislodged. I removed them and put the fan back together. Then I put the keyboard and Part A back. I couldn't remember whether the bundle of wires to the fan went above or below the fan casing and improvised various arrangements until I found one that seemed ok, but I'm still not completely

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sure.

Anyway, once it was back together, I tried running the laptop off the power cable. The green light went on indicating that it was plugged in and then a moment later a yellow light at the opposite end of the laptop (i.e. where one's wrists are when one uses it, at the edge) went on. Next to that yellow light was an icon consisting of an arrow pointing to what looked like a battery.

So, maybe it was complaining about something having to do with the battery. I had, in fact, removed the battery, after a few unsuccessful attempts to do so due to not having unlocked it, and then put it back in.

I should perhaps also mention that the laptop doesn't latch closed. That seems to be due to hooks from the top that are supposed to fit into holes on the bottom at the wrist end having broken off. In the hole on the right, I noticed something showing that looked like a piece of metal. With the laptop turned off, I poked it gently with a small screw driver and it fell in. When I took out the battery, it fell through one of the holes that is used to hold the battery in place and I removed the piece. I looked pretty carefully at the battery and I'm pretty sure it is not a piece of the battery. It is made of copper and looks like it might be some kind of lead, but it could just as easily be part of some kind of latch. Later I took another look at the hole I first looked in and saw more metal pieces, apparently stuck together. I poked again and the part fell down, but returns when the laptop is turned over. There seems to be no way to get it to fall down through the same battery hole I extracted the first piece from. When I get better at opening up and taking apart the laptop, I might figure out how to get at it.

In my earlier attempts to turn on the laptop, I had not put the screws back in. I did so and tried again, but the results were no different: the yellow light at the front with the icon showing an arrow pointing to what looks like a battery went on and it didn't respond to trying to push the on button.

One final note: when the laptop was given to me, it worked. It ran Linux until the temperature reached 84 C (or whatever) and then turned itself off. Since that is supposed to be a safety feature, to protect the CPU and stuff, probably the laptop is ok. But I thought I should mention it.

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Ignorantly,

Allan Adler <ara@xxxxxxxxxxxxxxxxxxxx>

* Disclaimer: I am a guest and *not* a member of the MIT CSAIL. My actions and

* comments do not reflect in any way on MIT. Also, I am nowhere near Boston.

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