

# Re: hardware Problem?

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<http://www.tech-archive.net/Archive/WinXP/microsoft.public.windowsxp.hardware/2007-06/msg00677.html>

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- *From:* w\_tom <w\_tom1@xxxxxxx>
  - *Date:* Mon, 25 Jun 2007 23:17:04 -0700
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On Jun 25, 9:47 am, "Anna" <myn...@xxxxxxxxxx> wrote:

5. As "peter" indicated the problem could result from a failing powersupply. The only practical way to tell would be to replace the current one with a known working PS.

Going beyond Anna's point; don't fix anything until something is identified as defective. For example, a fan that does not spin; only then is the fan considered for replacement. If it spins, do you replace it anyway? Yes, if doing shotgunning.

Unfortunately, Anna's point five is in error. For example, if all doors are sticking inside a house, do you plane down the doors to make them fit? Of course not. First confirm the house foundation is not crumbling.

A power supply is a computer's foundation. Anything can appear intermittent or defective if power supply integrity is not established. Your power supply could be 'crumbling' for more than six months to create intermittents. A computer works fine for hours or days before crashing because power supply has been defective for 6+ months – maybe even when first provided.

Power supply is a first hardware check; performed in but two minutes with a 3.5 digit multimeter. A tool so ubiquitous as to be sold even in K-mart. A tool so simple that even Ipods are more complex. A tool as necessary as a screwdriver if one is going to fix things electrical. And sold in most stores that also sell screwdrivers. If a meter is too complex, then you had no business cleaning out dust.

In your case, execute multiple programs so that all peripherals are accessed simultaneously (multitasking). IOW display complex graphics (from a movie), while reading a floppy and hard drive simultaneously, while downloading something from the net. Now take four voltage measurements. Measure a voltage on one of each colored wire from power supply to motherboard. Readings on orange, purple, red, and yellow wires must exceed 3.23, 4.87, and 11.7 volts. If true, then

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power supply 'system' (not just a power supply) is known good. Furthermore, you now have numbers to post here so that more knowledgeable posters might add useful information. Your replies will only be as good as the facts and numbers you provide.

With power supply known good, only then move on to other suspects.

Heat is not a reason for failure. When others cite heat as problems, well, that is too common among those who did not learn how hardware works. Heat is a diagnostic tool. Currently your system is intermittent. If problem can be made hard, then the problem is easily located. Computers consider a room at 100 degree F as 'pigs heaven'. Only computers with defective hardware fail when room temp exceeds 100. Even a computer full of dust must work just fine in a 100 degree room.

Another diagnostic method is to heat selective components with a hair dryer on highest heat settings. So hot as to be uncomfortable to touch; but not leave skin. If a warmed part causes failure, well, that is a 100% defective part. Those who never learned hardware, instead, want to cure that defective part with "more fans".

As Anna noted, get diagnostics. Responsible computer manufacturers provide comprehensive hardware diagnostics for free (on computer and on their web site). If your manufacturer is not so responsible, then (painfully) download each diagnostic separately from the component vendor. Best test is each diagnostic at 70 degrees; then repeated at 100 degrees. That also includes memory diagnostics.

Unfortunately, by trying to fix things first, you have destroyed what could have identified the suspect. Windows was reloaded only on wild speculation. Therefore system (event) logs were destroyed. Logs with history of what failed previously. Just another example of why responsible techs first learn what is defective long before trying to fix things.

Three simple tasks to include what Anna has posted. First (and before any other hardware analysis), get a 3.5 digit multimeter and get those voltage measurements because your symptoms are also typical of a supply that has been defective for more than 6 months. Don't verify a power supply by swapping power supplies. Remember, it is a power supply 'system' – not just a power supply.

Also perform hardware diagnostics; and repeat at elevated temperatures.

And finally review system (event) logs to discover what has been detected by the OS as defective (intermittent).

The last thing to do is swap parts. Swapping occurs only after a suspect has been identified. Shotgunning (whether with computers,

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cars, or satellites) is always the indication of one who has not a clue; therefore is 'firing a shotgun into the dark'. Even trained soldiers don't do that.

And again, your replies here will only be as good as the numbers you provide. Demonstrated also is how to obtain information from better informed lurkers.

Nothing posted above is beyond abilities of anyone who can learn to drive a car. However some fear only because they never did it before.

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