

# Re: Weibull Distribution but with a varied cycle time

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*Source:* <http://sci.tech-archive.net/Archive/sci.stat.math/2007-01/msg00479.html>

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- *From:* "Old Mac User" <[chendrixstats@xxxxxxxxx](mailto:chendrixstats@xxxxxxxxx)>
  - *Date:* 27 Jan 2007 14:03:04 -0800
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David...

While I'm thinking about it, run a Google search on Weibull Graph Paper and you can quickly find some excellent paper in pdf format. If you need insight into how to plot it and how to interpret it, I can copy some pages from a book (no longer in print... but the best and easiest-to-understand book on this) and ship that to you. Trying to do this with Excel is very error prone... gives you no insight... and a genuine time-waster.

Re... the matter of failure on startup. That's not going to fit into a neat Weibull framework. In a Weibull analysis the data is always a positive value (not a zero time-to-failure). The sensible thing to do with startup failures is to document those as "frequency of startup failures"... an estimate of "the probability of a failure on startup"... and treat that as a separate issue. Then... for those cases where actual (positive values) time-to-failure data were obtained... run the classic Weibull analysis on those data.

No, startup failures are not censored data. Censored data means there was an ongoing opportunity for failure, but it hasn't happened after X hours when we finally stopped the test.

Among other things, a valid Weibull analysis provides a way of making certain predictions. Predictions such as "This device/system has been running for 200 hours. What is the probability it will fail in the next hour? In the next 100 hours? Before 600 hours of service?"

I do a lot of work with failures in certain types of electronic devices, so I have a good sense of what you are doing. I say "go for it." OMU

Re: Weibull Distribution but with a varied cycle time

On Jan 27, 4:50 pm, "googlinggoog...@xxxxxxxxxxxxx"  
<googlinggoog...@xxxxxxxxxxxxx> wrote:

Thanks,

Basically I'd like to do it myself, as i'll learn that way, but basically the device will be in an automated rig to collect the data to a computer so i dont need to sit there for hours, and i can let it run over a week or more 24/7 if need be.

The device powers on and supplies voltages at set amounts (although they could be varied), so things like the current in and the voltages out, can be checked to ensure that the values are within tolerance.