

Distribution Fitting (Life Distribution)

Use the Life Distribution platform to explore and fit distributions for time-to-event data.

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- From an open JMP[®] data table, select Analyze > Reliability and Survival > Life Distribution.
- 2. Select a continuous time variable from **Select Columns**, then click **Y**, **Time to Event** (continuous variables have blue triangles).
- If the data contain censored values, select the censoring variable and click Censor. Change the Censor Code if needed (the default is Censored).
- Select the Confidence Interval Method (the default is Wald), and click OK.

JMP will display:

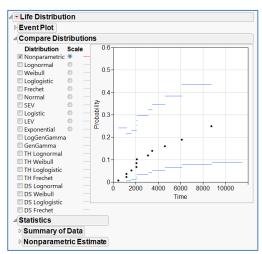
- An Event Plot (click on the gray icon to open), which graphically depicts failures (denoted by X's) and censored events (denoted by triangles).
- The **Compare Distributions** panel, which allows you to compare the fit of various distributions.
- The Statistics panel, with summary statistics, parameter estimates and profilers for each distribution selected.

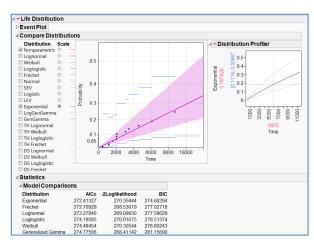
To Compare Distributions:

- Click a radio button under **Scale** to apply the scale for a distribution. If the selected distribution fits the data well, the plotted points will approximate a straight line.
- Check a box under Compare Distributions to fit a distribution and display a fitted line, shaded confidence bands and a Profiler for the distribution.
- Select Fit All Distribution or Fit All Non-negative under the top red triangle to compare all distributions using model comparison criteria such as AIC and BIC.

Fan.jmp (Help > Sample Data Library > Reliability)







Tips:

- To compare the same life distribution across groups, use the Compare Groups option in the Life
 Distribution dialog. Other options, such as show survival curve and view tabbed report are available
 from the top red triangle.
- If studying competing failure causes, enter the variable in the Failure Cause field in the launch window.
- Continuous distributions can also be fit in Analyze > Distribution.

Note: For more information, see the book *Reliability and Survival Methods* (under Help > Books) or search for "life distribution" in the JMP Help.