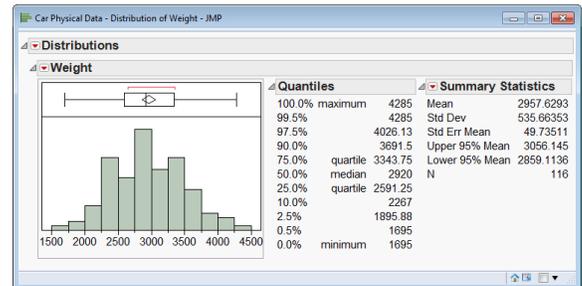
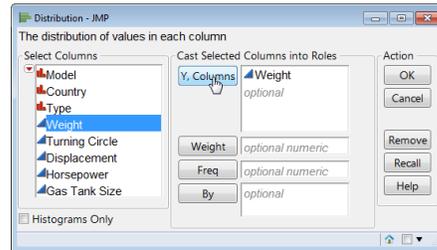


# Assessing Normality

This page documents some ways to assess normality for a continuous (quantitative) variable.

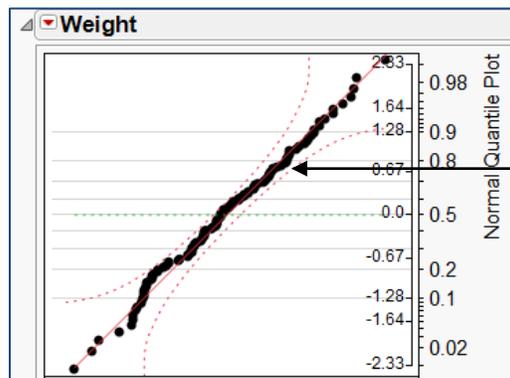
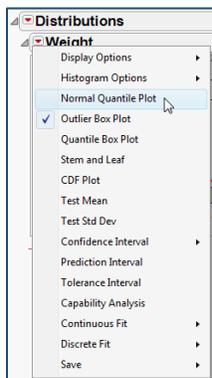
1. From an open JMP® data table, select **Analyze > Distribution**.
2. Select one or more continuous variables from **Select Columns** and click **Y, Columns**.
3. Click **OK** to generate a histogram and descriptive statistics (a horizontal layout is shown below).

**Example: Car Physical Data.jmp (Help > Sample Data)**



## Normal Quantile Plot

Click on the **red triangle** for the variable (Weight, in this example), and select **Normal Quantile Plot**.

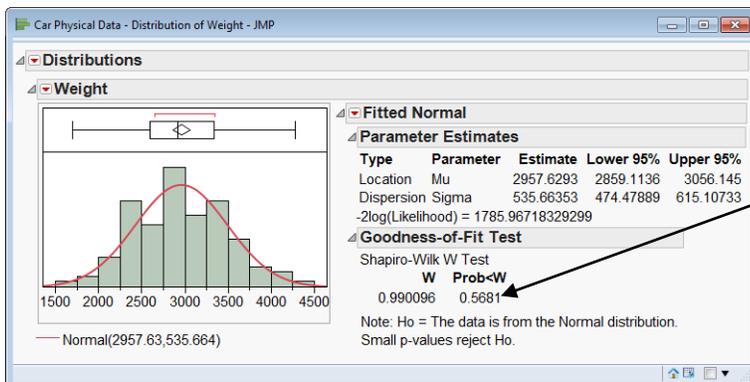
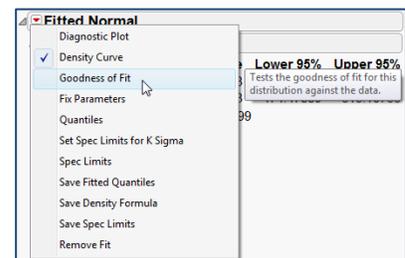


If the data more or less follows a straight line (fat pen test), we can conclude that the data came from a normal distribution.

For this example, we would conclude the distribution is approximately normal.

## Fitting a Normal Distribution

1. Select **Continuous Fit > Normal** from the **lower red triangle**.
2. In the resulting output, click on the **red triangle** for **Fitted Normal** and select **Goodness of Fit**.



Interpretation (using a significance level of 0.05):

- Prob<W is the p-value for this test.
- Our p-value is 0.5681.
- A p-value less than 0.05 would indicate that the underlying distribution is not normal.
- We do not have sufficient evidence to conclude that the underlying distribution is not normally distributed.