

# Standard Capability Study

**Purpose:** A capability study is conducted to determine if particular part dimensions are likely to meet customer requirements during production.

**A capability study shall include:**

1. Review of part drawings and specifications for key characteristics.
2. Dimensional inspection of key characteristics utilizing Apple Rubber Products Quality Laboratory.
3. Review of dimensional inspection results.
4. Confirm each key characteristic has inspection results.
5. Verify that inspection results were obtained using NIST traceable measuring device.
6. Input of data to statistical process control (SPC) program for computation of  $C_{pk}$
7. Review of nonconformance information, if applicable.

**Sampling:**

- 33 pieces randomly selected from a particular manufacturing batch.

**Data Evaluation:** The person conducting the gage capability study shall review the output from the data analysis to determine if the results are acceptable. The following requirement must be met for the Capability Study to be deemed internally acceptable:

- $C_{pk}$  index values must meet value agreed to between customer and Apple Rubber. Typical values are:
  - 1.00
  - 1.33
  - 1.67

Below is a link to a sample Capability Study:

[CPK Graph](#)