

Engineering Specification #10 – Handlebar Reach Range

The purpose of this test is to verify that handlebar reach range is large enough to accommodate the 5th percentile female to the 95th percentile male stature. The ideal value is a range from less than 15 inches to greater than 19 inches, and the marginal value is a range from 15 to 19 inches.

Start Date: 5/14/08

Finish Date: 5/14/08

Engineers set-up experiment: Jonathan Bawas, Carl Mangelsdorf, James Nardo, Jeffrey Tempest, Jen Zelasko

Equipment Needed:

1. Measuring Tape

Experiment Set-up:

- 1.) **Place handlebars at 90 degree angle position.**
- 2.) **Measure horizontal distance from center of seat to center of hand at lowest point on handlebar grips.**
- 3.) **Place handlebars at 180 degree angle position.**
- 4.) **Measure horizontal distance from center of seat to center of hand at highest point on handlebar grips.**

Horizontal distance at lowest position settings: 8 inches

Horizontal distance at highest position settings: 23 inches

Conclusions:

The shortest handlebar reach distance achievable is an 8 inch horizontal distance from the center of the seat to the center of the hand at lowest point on the handlebar grips. The longest handlebar reach distance achievable is a 23 inch horizontal distance from the center of the seat to the center of the hand at highest point on the handlebar grips. These reach distances achieve the ideal range values.