

### **Engineering Specification #9 – Handlebar Height Range**

The purpose of this test is to verify that handlebar height range is large enough to accommodate the 5<sup>th</sup> percentile female to the 95<sup>th</sup> percentile male stature. The ideal value is a range from less than 9 inches to greater than 10 inches, and the marginal value is a range from 9 to 10 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 seat at lowest position, and place handlebars at lowest position closest to the height of the seat.**
- 2.) **Measure vertical distance from top of seat to lowest point on handlebar grips.**
- 3.) **Place seat at highest position, and place handlebars at highest position furthest from the height of the seat.**
- 4.) **Measure vertical distance from top of seat to highest point on handlebar grips.**

Vertical distance at lowest position settings: 0 inches

Vertical distance at highest position settings: 10 inches

#### **Conclusions:**

At the lowest seat and handlebar height settings, it is possible to have the handlebars at 0 inches vertical distance above the seat. At the highest seat and handlebar height settings, it is possible to have the handlebars reach a 10 inch vertical distance above the seat. These height distances achieve the ideal handlebar height range values.