

## Problem Task 1 - Electrical test

### Primary Issue

*Repetitive motions of the neck, because of the need to look back and forth between the leads in her hands and the digital readout.*

### Short term ideas

- 1. Raise person to better height — raise the work surface and get a tall stool.*
- 2. Stand to do the work and put the electrical components on a slanted podium stand.*
- 3. Lower the digital readout — switch unit with the one on the lower shelf. (Best idea.)*

### Longer term ideas

- 1. Use a simple green light to signal connectivity, locate the light directly in front of employee at a height just above the electrical components. (Note that the employee does not check the precise number on the read-out, rather just whether it lights up or not.)*
- 2. Automate.*
- 3. Use an audible sound to indicate connection. Eliminate the need to look at a light. (Best idea.)*

### Other issues and ideas

*Issue: Static grip of two leads (one in each hand). Repetitive motions: each lead must be oriented and placed on the electrical component. Idea: Devise tool to hold both leads. Devise guide bars to help place the leads quickly.*

*Issue: Less than adequate tote to work out of. Find a better holder for the electrical components.*

*Issue: Need better chair.*

Comment: A frame-by-frame analysis shows that the cycle time is about 2 seconds, and about ½ second is taken up with moving the neck. Thus, efficiency could be improved by roughly 25% by making the task easier for the employee!