



**Sandalwood**  
Engineering & Ergonomics  
Work Smarter. Work Safer.



# Human Factors in Maintenance and Serviceability

**Review of equipment design for safe and efficient monitoring and maintenance**

## Client:

Manufacturing Company

## Objective:

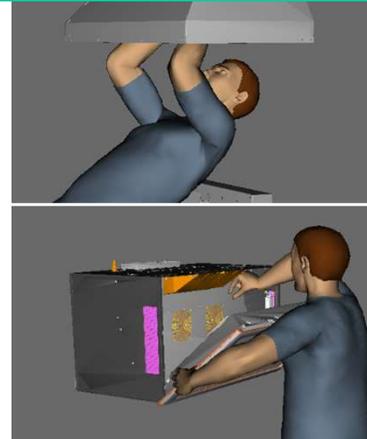
To review scheduled and unscheduled maintenance tasks in design phase of equipment manufacturing. We accomplished this by:

1. Creating easy to use reference material and guidelines focused on design for service and maintenance
2. Using digital human modeling to assess new designs for reach and clearance as well as assessing tools and vehicles before equipment purchase and product launch
3. Providing reports and metrics to monitor and identify areas to improve related to serviceability and maintainability

## Project Description:

Sandalwood was engaged to integrate human factors into the development process of product and equipment design. We performed assessments and data analysis for service engineering functions to show the benefit of changing a design in the virtual space to be more efficient and accessible for maintenance and service teams.

Using Siemens JACK we assessed the client's designs to ensure maintenance and service personnel could reach desired locations



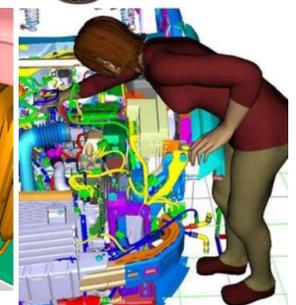
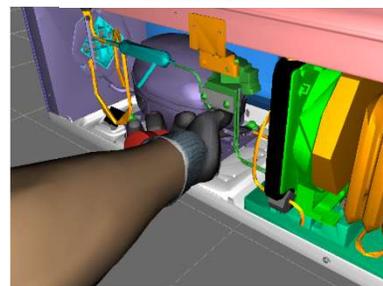
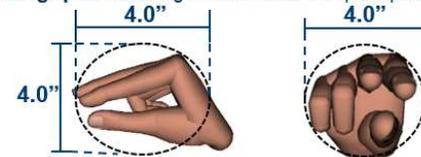
Sandalwood prepared reports with success of the end user in mind and provided Advanced Manufacturing with the critical information required to make educated decisions.

## Results:

Developed client specific written guidelines with a focus on design for serviceability.  
Interviewed and shadowed service technicians, building relationships with techs, increasing morale and participation in safety culture.  
Completed +50 virtual assessments to validate maintenance process.  
Improved Quality by providing feedback on the design of equipment and tools with a goal of enhancing reliability, diagnosability, and capability of service tech

**Estimated ROI at \$343,000**

Pinch grip Ex. Inserting wire connectors or push pins



Sandalwood is an engineering and ergonomics consulting firm. Since starting in 1989, Sandalwood has designed over 2,500 projects that have executed strategic solutions for manufacturers. By providing their knowledge, research, technology, and resources, Sandalwood supports its clients from the executive level to the factory floor so you can...

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