

DESIGN SYSTEMS, INC.

Manufacturing Engineering & Consulting

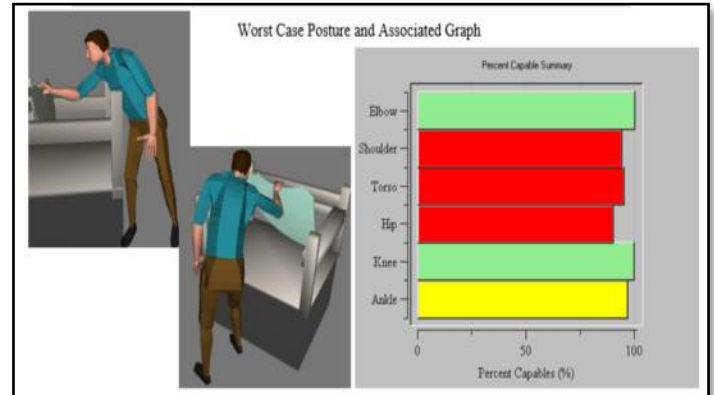
Ergonomic Analysis of Front Glass Installation PASSENGER CAR MANUFACTURER

Project Description

A passenger car manufacturer contracted Design Systems, Inc. (DSI) to perform an ergonomic study of a Front Glass Install operation on the Door Line at its manufacturing facility. The purpose of the evaluation was to identify any ergonomic problems or concerns. DSI utilized standard anthropometric design criteria, specifically studying the movements of the 95th percentile male and the 5th percentile female with respect to height. Included in the ergonomic tools for evaluation were EAI's Jack ergonomic software and Ascension Technology's wireless motion capture.

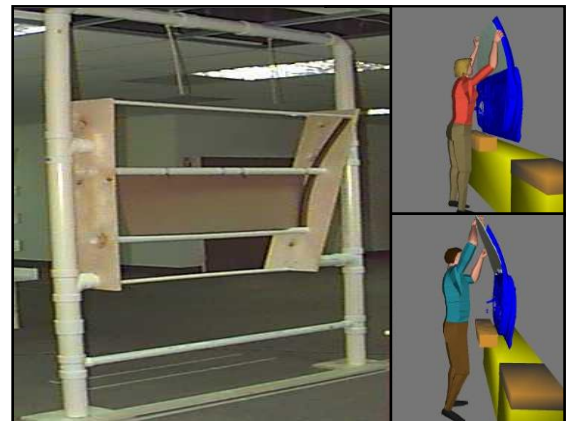
Client Objectives

- To carry out an ergonomic evaluation of door install process.
- To analyze the postural parameters involved in the operation
- To assess the stress levels on operator during various tasks of the install process.
- Identify and eliminate the harmful tasks/operations.



PROJECT OUTCOMES

- Performed a motion capture of movements at different heights using a mock-up of the door install operations for each task
- Identified the non-ergonomic aspects of the process using Lower Back Analysis, Static Strength Analysis, Postural Analysis, and Lifting Analysis to generate future improvements.
- Evaluated each task for risks of injury to the operator and categorized under High, Nominal and Low Risk.



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