

Success Story:

DENSO Plant Makes Big Improvements in Material Handling

DENSO, a leading supplier of advanced automotive technology, systems, and components for the world's major automakers, operates in 32 countries and regions with approximately 119,000 associates. Established in 1986, DENSO Manufacturing Michigan, Inc. (DMMI) is an industry leader in the design and production of advanced automotive heating and cooling components and systems. Located in Battle Creek, Michigan, DMMI employs over 2,200 associates and is one of the area's largest companies.

With 70% of DENSO's workers' compensation costs related to repetitive strain injuries, the organization took a stand to eliminate or reduce as much ergonomic risk as possible throughout the Battle Creek facility. The first step was to focus on areas with the highest risk. Using Humantech's BRIEF Exposure Scoring Technique™ (BEST) assessment tool, the radiator ergonomics team identified one particular area of concern: the radiator line 3 and 4 crimp areas.

Parts for the radiator crimp areas are manufactured in one section of the facility and transported in totes across the plant for assembly. The totes contain parts for 20 to 30 radiators and weigh between 25 and 39 pounds each. Initially, the BEST assessment score for the crimp areas was 31, indicating a high risk level for shoulder and back injuries.

"Our biggest challenge was to improve the ergonomic conditions of the material handling activities for the radiator lines 3 and 4 while improving the efficiency of the operation" said Scott LeForge, Section Leader of Safety.

DENSO

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Greg Tilley,
Section Leader of Production

After identifying the highest-priority area for improvement, the radiator ergonomics team began to implement changes. By practicing the philosophy of Fix Once, Repeat Many (FORM), the team applied best practices from within the facility to lines 3 and 4. Doors were modified so flow racks could be replaced with roller conveyors, electric scissor lifts were installed to do the heavy lifting, and carts were retrofitted with a roller system cart bed for easy-on, easy-off transporting.

With the improvements in place, the team reassessed the operations, resulting in a BEST assessment score of 6, well within the low range, for the previously high-risk indicators for shoulder and back injuries. Not only did the ergonomic improvements significantly reduce ergonomic risk, but the operation has also seen productivity improvements. The newly modified operation has resulted in a reduction of tote handling by 156 hours per year, and a 5% direct labor index improvement equating

to \$76,608 per year. Greg Tilley, Section Leader of Production added "The real benefit of this project was that not only did we improve safety in two different areas, we were able to improve productivity and associate morale at the same time. This project was a great example of how the DMMI ergonomics team can come together and eliminate a potential risk before an injury occurs."

About Humantech

For 30 years, global companies have relied on Humantech for workplace improvements. By combining the science of ergonomics and our unique 30-Inch View®—where people, work, and environment intersect—we deliver practical solutions that impact safety, quality, and productivity. At Humantech, we believe people make productivity happen. The 30-Inch View is a registered service mark of Humantech, Inc., 2008.



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