

Cardington Yutaka Tech. Inc., Cardington

Intervention Key Words: Conveyors, Ball Slide Table, Converter, Cylinder Lift

Industry: Manufacturing

Risk Factor(s): Repetitive motion, Manual Handling-Lifting/Carrying, Awkward Postures-Back deviations

Situation:

Cardington Yutaka Tech. Inc. supplies torque converters and catalytic converters to the automotive industry. Concern of Cumulative Trauma Disorders (CTDs) has arisen in two tasks on the torque converter assembly line. The first task involves the manual inspection of the converter. Quality control protocol requires around 100 parts per hour to be manually inspected. During inspection, the converter, weighing 34 lbs., must be carried from a conveyor by the operator to measuring machines and then placed on another conveyor system to be either repaired or sent to the next step in the assembly process. Risks stemming from the repetitive lifting of the parts and awkward heights of the machines are the primary cause of concern at this workstation. The second area of concern is at the leak-test/repair station. Here, the rejected parts are submerged to locate leaks and then weld sealed by the same operator. CTD risk factors for this area are the same as at the inspection area.



Placing converter on conveyor



Placing converter into measuring machine

Solution:

To alleviate the risks found at the inspection area, Cardington Yutaka Tech. Inc. purchased a cylinder lift and conveyor system. The lift places the torque converter in the measuring machine, rather than the operator picking it up, and the conveyor eliminates the need to carry the part around the station. The intervention incorporated

into the leak-test/repair station consisted of two gravity fed conveyors and one powered conveyor. Although there is still some lifting required, it can be done from the proper height and the amount of carrying is greatly reduced. Total cost for the intervention was \$21,687, before a \$14,430 award from Safety Grant\$



Conveyors make moving the torque converter around the station an easy task

Results:

- CTD rate, lost days rate and restricted days rate have remained at zero for 24 months following the intervention.
- Employee turnover, measured per 200,000 hours worked, has decreased from 6.8 employees to zero.
- Risk factor scores averaged 12.5% less following the placement of the intervention.