Akro-Plastics, Kent

Intervention Key Words: Vacuum, Conveyor
Industrial Key Words: Manufacturing
Risk Factor(s): Repetitive motion, Awkward Posture- Back deviations, Shoulder deviations, and Wrist deviations

Situation:

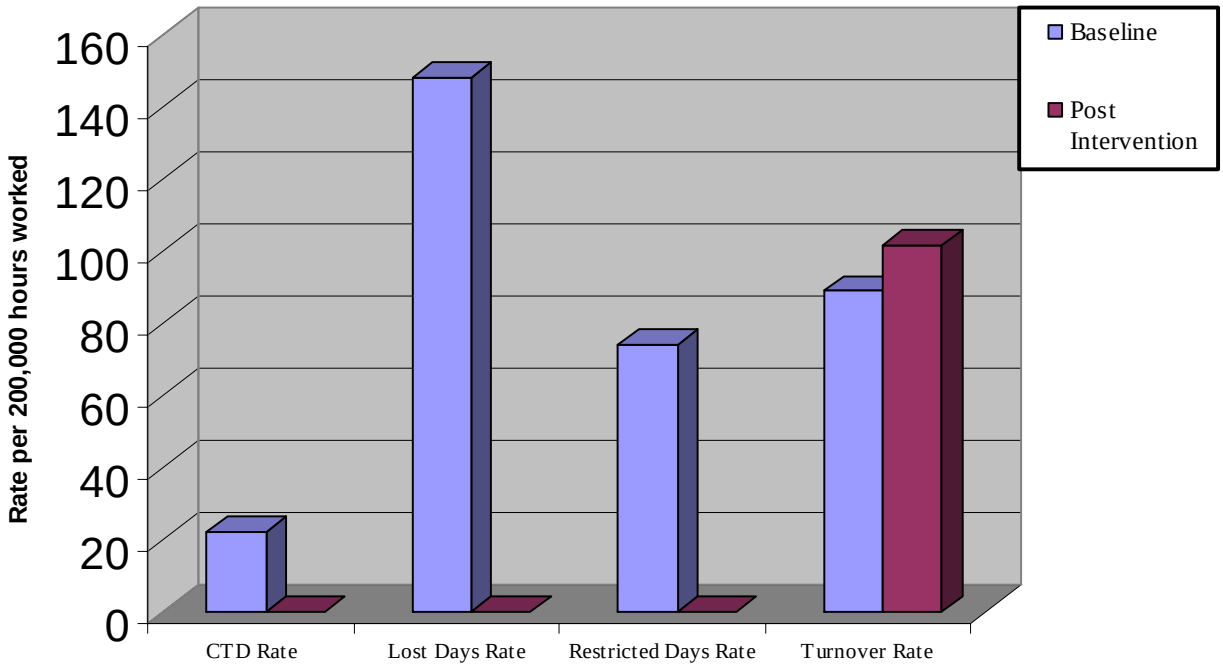
Akro-Plastics of Kent is a plastics molding company. Their processes include both rotational and extrusion molding. The company purchases out of spec plastic resin, which is packaged in Gaylord boxes. A Gaylord box is simply a very large shipping box with reinforced sides to handle extra weight. Resin from the boxes is transferred to extrusion machines by hand with large scoops. Plastic products such as buckets, handles, various parts are produced. Scooping resin from the boxes requires the operator to bend over with his head inside the box to fill the scoop and then lift the scoop and twist 180 degrees to empty it into the machines. Risk factors for Cumulative Trauma Disorders (CTDs) include repetitive bending/lifting, extended reaches, twisting, wrist (radial & ulnar) deviation, and awkward postures.

Solution:

Akro-Plastics installed a Vacuum Resin Conveying System to address the CTD risk issue. The system will pull resin directly from the Gaylord box and transfer it to the extrusion machines. Total cost for the intervention was $3,818. Akro-Plastics received $2400 in assistance from SafetyGrant$.

New Vacuum Conveyor

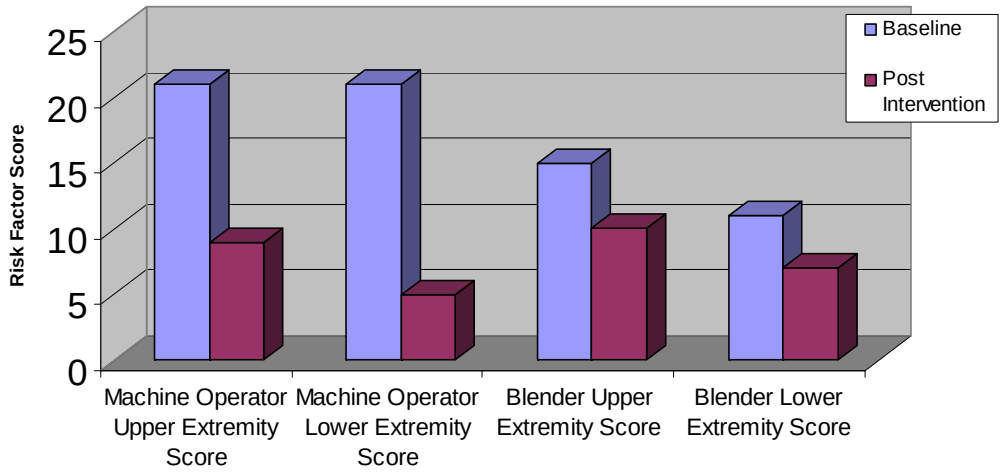
Results:



- CTD rates (per 200,000) decreased from 22 to 0 in 24 months following the intervention compared to the year prior.

- Lost Days rate and Restricted Days rate decreased 100% in the same time period. Their baseline rates were 148 and 74 days per 200,000 hours worked, respectively.

- Employee Turnover rates increases slightly but may not be directly attributed to the intervention.



- Risk factor scores, averaged over 2 tasks, decreased 54% following the intervention.