

Autoplas, Bellevue

Intervention keywords: Robot, Paint line, Plastic molding

Industry: Manufacturing

Risk Factor(s): Repetitive motion, Awkward Posture-Squatting/kneeling, wrists, shoulders

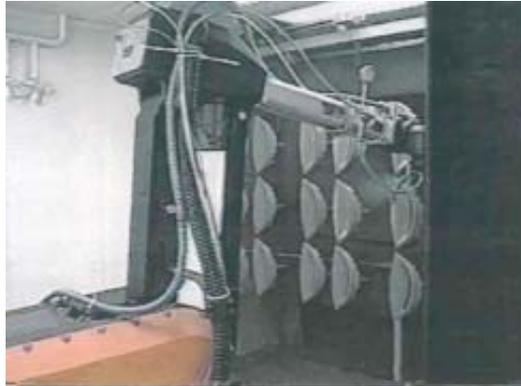
Situation:

Autoplas is a division of Windsor Mold Ohio, Inc. They work with plastic molding for vehicle components by either prepping the components or painting them and then packaging up for shipping to the automotive industry. The area of concern is with the paint line. Currently 2 employees paint engine covers that pass by them on a conveyor. The conveyor moves at approximately 4 feet per minute. The covers are in two rows, a top row (65" high) and a bottom row (42" high). One employee works with the top row and the other works with the bottom row; however they rotate every 2 hours between the rows. The top and sides of the engine covers are painted. Risk factors associated with this job involve awkward wrist postures, reaching, elbow extension from reaching, bending the back to paint the bottom row, shoulder extension, and repetition. Although Autoplas has not experienced any Cumulative Trauma Disorders (CTDs), their position is one of preventative measures to eliminate a hazard.

Solution:

Given their goal to completely reduce the risk factors associated with repetitive wrist and shoulder movement, Autoplas purchased a remanufactured Fanuc P-100 robot complete with a control package and booth enclosure. Not only will this eliminate the risk factors but also increase production and quality. The employees were trained on how to operate the robot and perform other jobs within the facility. The total cost of the intervention was \$106,203. Autoplas received \$40,000 from the SafetyGRANT\$ program to help offset the costs.





Fanuc P-100 Robot

Results:

- CTD rate, Restricted Days, Lost Days rate, and Employee Turnover (standardized per 200,000 hours worked) were at 0 for the year prior to the intervention and remained at 0 for the two years following.
- CTD Risk Factor Scores, averaged 28 prior to the intervention and decreased 100% following the intervention.