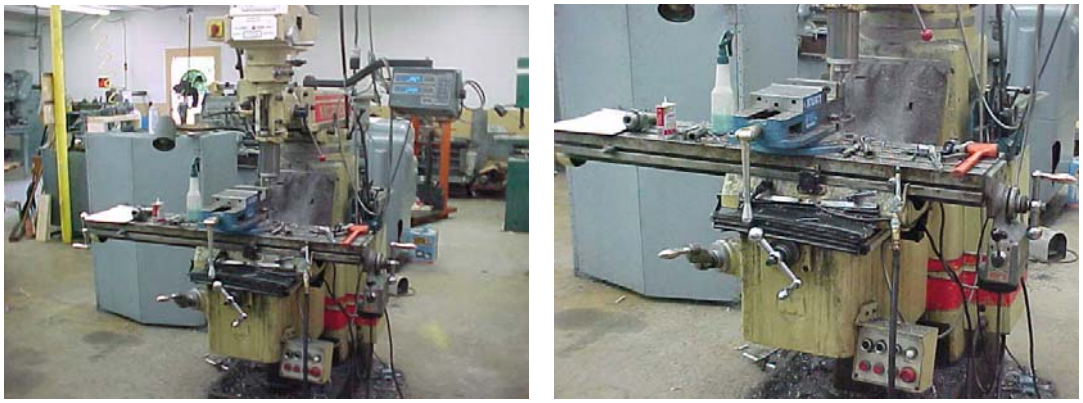
Dollman Technical Services, Whitehouse

Intervention Key Words: CNC Milling Machine, Geared-Head Drill Press
Industry: Other: Machine Shop, Manufacturing
Risk Factor(s): Awkward Posture- Shoulder Wrist deviations, High Hand Force- Pinching/Gripping, Manual Handling- Pushing/Pulling, Repetitive motion

Situation:

Dollman Technical Services provides electrical and mechanical engineering services, custom machine building, PLC based control systems, and electrical and mechanical troubleshooting for companies in the metalworking industry. Concerns for Cumulative Trauma Disorders arise in various tasks in the facility, especially while operating the milling machine (produced 1992) and the drill press (produced 1950). In addition to high repetition, other milling machine risk factors include the torque requirement of manually cranking the feed handles to move a table and tool changes which require the worker to step onto a portable platform in order to reach the top of the drawbar, placing the worker in an awkward position. CTD risks related to the drill press are the amount of manual force required with drilling large holes through steel, the use of a tubular extension to apply sufficient force and a multitude of repetitive motions associated with changing the motor speed.

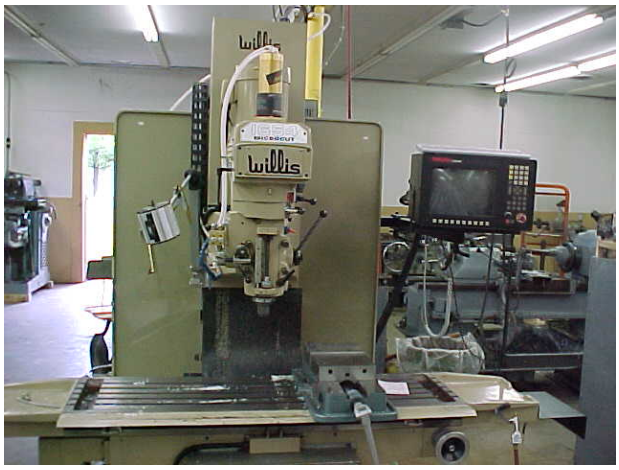


Pictures of the manual milling machine

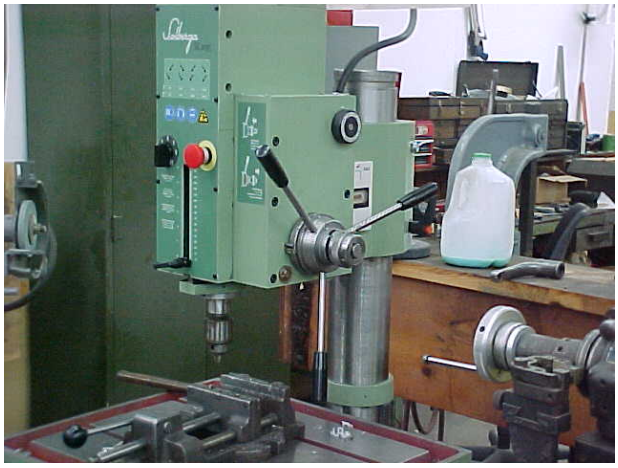
Solution:

In order to address their CTD issues, Dollman Technical Services purchased a new, computer controlled Willis Microcut CNC Milling Machine which only requires programming as opposed to manual manipulation, and changing tools is much easier and requires little to no awkward positioning. They also purchased a new drill press with a geared-head drill press and a power feed to eliminate the requirement for excessive force and allow for expedient speed charges. Total costs associated with the

purchase of the new equipment were $48,036. Dollman received $38,400 in assistance from SafetyGrant$ to offset the costs.

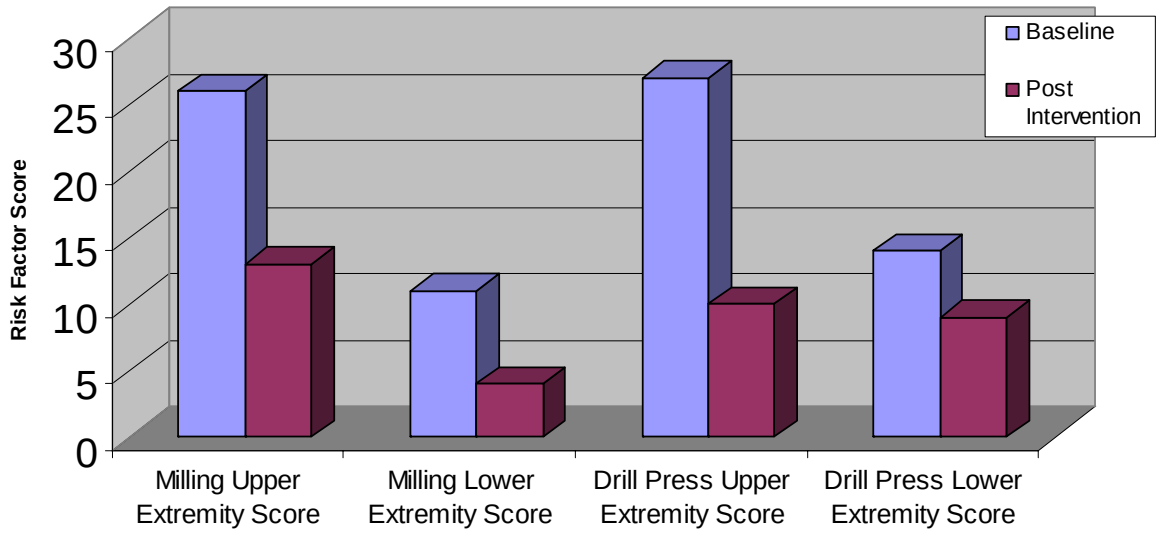


New CNC Milling Machine



Gear-Head Drill Press

Results:



- CTD Risk Factor scores for operating the milling machine decreased 54% following the intervention.
- CTD Risk Factor scores for operating the drill press decreased 54% also.
- CTD, Lost Days, Restricted Days and Employee Turnover rates (per 200,000 hours worked) were at 0 the year prior to the intervention and remained at 0 for 2 years following.