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| **ERGONOMICS ANALYSIS** |

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| **Step 1 – PROVIDE BACKGROUND** | | | |
| **Job/Task:** Fill CNC Reservoirs | **Date:** 2-16-08 | **Time:** 11:00 AM | **Analyzed by:** Mark Johnson |
| **Area/Dept/Location:** Machine Center | **Project Number:** 00134 | | **Employee Name (optional):** |
| **Lead/Supervisor:** Lisa Jackson | **Workstation:** CNCs 1-7 | | **Job Title**: CNC Operator |

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| **Step 2 – CURRENT MAJOR STEPS** | **Step 3 – ERGONOMICS ISSUES** | **Risk** | **Step 4 –SOLUTIONS** |
| 1. Place empty 5 gallon buckets (2) on floor | None | **Low** |  |
| 1. Fill buckets 75% full with filler hose | Out-of-neutral posture (bend over) to handle hose to fill buckets  **Goal:** Reposition buckets to allow neutral body position when filling buckets with hose | **Mod** | **OPTIONS**:   1. Plumb each CNC reservoir (cost factor) 2. Obtain cart to position buckets on the cart at a level to allow neutral body position (20” from the floor) |
| 1. Pick up 2 buckets (one in each hand) by bucket handle and carry to CNC machine.   Distance: 75 to 125 feet.  Bucket weight: each at 30# | Ineffective work process  Manual handling of heavy load (evident physical strain)  **Goal:** reduce/eliminate significant physical strain | **High** | **OPTIONS**:   1. Plumb each CNC reservoir 2. Use long hose to reach to each CNC, will require up to 125’ of hose 3. Obtain cart to transport buckets |
| 1. At CNC machine set bucket down on floor   Pick up one bucket and manually pour into CNC reservoir | Ineffective work process  Manual handling of heavy load (evident physical strain)  **Goal:** reduce/eliminate significant physical strain | **High** | **OPTIONS**:   1. Plumb each CNC reservoir 2. Use long hose 3. Obtain cart to maintain buckets in power lift zone and provide a base of support when tipping the bucket contents into the reservoir |
| 1. Return empty buckets to storage area (located by the filler hose) |  | **Low** |  |
| **MISC NOTES**   1. No injuries had occurred; however employees reported significant physical strain with the manual handling method 2. Seven (7) CNC machines are operated, depending on use each may be filled 1 to 3 times weekly. Approximately one bucket is used to fill the reservoir at each machine. | | | |

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| **Step 5 – FOLLOW-UP** |
| Based on overall review (including level of use, cost analysis to implement various solutions and employee input) **Option 3. Obtain cart** was implemented.  Cart is a Little Giant with two swivel and two fixed 8” wheels with handle on swivel wheel end. Cart platform height is 20”  Cart was purchased for $300.00; employees received training in use of the cart.  Follow-up at 1 and 3 months intervals indicated excellent employee acceptance with significant decrease in reported discomfort and decreased risk of injury. |