**ErgoSystems Ergonomics Risk Factor Analysis**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **STEP ONE** | **Company:** |  | **Date:** |  | **Department/**  **Work Unit:** |  |
|  | **Prepared by:** |  | **Time:** |  | **Safety FYIs/ Injury History:** |  |
| **Job/Task Observed:** |  | **# People Affected:** |  | **Employees Observed:** |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **STEP TWO** | **Head/Neck/Eyes** | | | **Shoulders/Upper Back** | | | **Back (Mid/Low)** | | | **Arms/Elbows** | | **Hands/Wrists/Fingers** | | | **Legs/Feet** | | |
| **Posture** | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Female_Look_Down.png | | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Female_Look_Up.png | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Female_Reach_Above_Head.png | | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Male_Shld_Shrug.png | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Male_Back_Bent.png | | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Male_Extended_Back.png | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Female_Two_ Arm_ Reach.png | | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Wrist_Flexed.png | | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Wrist_Bent_Thumb.png | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Squat.png | | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Kneeling.png |
| L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Wrist_Extended.png | | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Wrist_Bent_LittleFinger.png |
| L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Female_Neck_Side_Bend.png | | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Female_Neck_Rot.png | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Reach_Behind_Body.png | |  | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Female_Back_Bent_Sideways.png | | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Female_Back_Rot.png | **L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Forearm_Palm_Down.png**  **L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\Forearm_Palm_Up copy.png** | | E:\tasks_actions\hand\06102.jpg | | E:\tasks_actions\hand\06103.jpg | L:\Forms\Ergonomics Analysis Worksheet\Manufacturing Ergonomics Analysis\Images\One_Leg_Up_On_Toes.png | |  |
| Look down > 300  Look up > 100  Side bent > 150  Rotated > 200 | | | Hands at/above shoulders/head  Shrugged shoulders  Reach behind body | | | Flexed forward >200  Extended back > 200  Bent sideways > 200  Rotated >200 | | | Fully extended arm  Rotation of wrists/forearms, palms up/down | | Wrist flex/extend > 20o  Wrist bent to side > 15o  Pinch grip  Power grip | | | Squatting  Kneeling  On one leg/up on toes | | |
| **Force** | 0 | Light: < 5# | | 0 | Light: < 5# | | 0 | Light: < 10# | | 0 | Light: < 3# | 0 | Light: < 2# | | 0 | Light: < 20# | |
| 1 | Mod: 5# to 10# | | 1 | Mod: 5# to 10# | | 1 | Mod: 10# to 20# | | 1 | Mod: 3# to 8# | 1 | Mod: 2# to 5# | | 1 | Mod: 20# to 40# | |
| 2 | Heavy: 10# to 20# | | 2 | Heavy: 10 # to 20# | | 2 | Heavy: 20# to 40# | | 2 | Heavy: 8# to 15# | 2 | Heavy: 5# to 10# | | 2 | Heavy: 40# to 60# | |
| 3 | Very Heavy: > 20# | | 3 | Very Heavy: >20# | | 3 | Very Heavy: >40# | | 3 | Very Heavy: >15# | 3 | Very Heavy: >10# | | 3 | Very Heavy: >60# | |
| **Duration (static)** | 0 | Low: < 10 sec | | 0 | Low: < 10 sec | | 0 | Low: < 10 sec | | 0 | Low: < 10 sec | 0 | Low: < 10 sec | | 0 | Low: < 10 sec | |
| 1 | Mod: 10 to 45 sec | | 1 | Mod: 10 to 45 sec | | 1 | Mod: 10 to 45 sec | | 1 | Mod: 10 to 45 sec | 1 | Mod: 10 to 45 sec | | 1 | Mod: 10 to 45 sec | |
| 2 | High: > 45 sec | | 2 | High: > 45 sec | | 2 | High: > 45 sec | | 2 | High: > 45 sec | 2 | High: > 45 sec | | 2 | High: > 45 sec | |
| **Frequency** | 0 | Low: < 0.5/min | | 0 | Low: < 0.5/min | | 0 | Low: < 0.25/min | | 0 | Low: < 0.5/min | 0 | Low: < 1/min | | 0 | Low: < 0.5/min | |
| 1 | Mod: 0.5 to 5/min | | 1 | Mod: 0.5 to 5/min | | 1 | Mod: 0.25 to 3/min | | 1 | Mod: 0.5 to 5/min | 1 | Mod: 1 to 5/min | | 1 | Mod: 0.5 to 3/min | |
| 2 | High: > 5/min | | 2 | High: > 5/min | | 2 | High: > 3/min | | 2 | High: > 5/min | 2 | High: > 5/min | | 2 | High: > 3/min | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **STEP THREE** | **Score *(per body part)*:** total number of checked boxes for **Posture** plus sum of numbers circled for **Force**, **Duration** and **Frequency**  **Risk *(per body part)* :** for each body part determine risk level depending on the total points for that body part: **Low**: 0 to 1, **Mod**: 2 to 3, **High** > 4 | | | | | | | | | | | |
| **Score**  [www.ergosystemsconsulting.com](http://www.ergosystemsconsulting.com) 952-401-9296 |  | **LL LM LHL** |  | **LL LM LHL** |  | **LL LM LHL** |  | **LL LM LHL** |  | **LL LM LHL** |  | **L L LM LHL** |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **STEP FOUR** | **Other Factors** | **YES** | **NO** |  | **STEP FIVE** | **Discomfort Survey/Employee Input** | | |
| **Production/Quality** – Work processes affected negatively | |  |  |  | **Complete survey based on average workday.**  Indicate left and right side using Key below: | | **Employee Comments:** | |
| **Training** – Inadequate safety or process training | |  |  | **0= NONE/MINIMAL:** Some discomfort, able to reasonable cope while performing general tasks | |
| **Vibration** – Of hand/arm, related to tool use (grinders, sanders, etc.) | |  |  | **1=MODERATE:** Moderate discomfort, some difficulty in performing general activities. | |
| **Vibration** – Of whole body, related to driving vehicles (fork trucks, etc.) | |  |  | **2=SEVERE:** Significant difficulty in performing general activities. | |
| **Temperature/Hot** – Exposure to hot environments | |  |  |  | **3=MAX:** Maximum discomfort (unable to function, admitted to the hospital.) | |
| **Temperature/Cold** – Exposure to cold environments | |  |  |  | |  |  |  | | --- | --- | --- | | **Body Part** | **Left** | **Right** | | 1. **Head/Neck/ Eyes** |  |  | | 1. **Shoulders/ Upper Back** |  |  | | 1. **Back (Mid/Low)** |  |  | | 1. **Arms/Elbows** |  |  | | 1. **Hands/Wrists/ Fingers** |  |  | | 1. **Legs/Feet** |  |  | | **Left (**     ) **+ Right (**     ) **= (**     ) | | | | |  |  |
| **Contact Stress** –Hard surface pressure on body from sitting or standing | |  |  |  |
| **Contact Stress** – Sharp edge pressure on body from workbench, tool, etc. | |  |  |  |
| **Tools** – Incorrect tool or tool used incorrectly | |  |  |  |
| **Task lighting** – Inadequate task light for inspection | |  |  |  |
| **Ambient lighting** – Too low or too high level of ambient lighting | |  |  |  |
| **Vision** – Difficulty in seeing parts/materials to assemble or inspect | |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **STEP SIX** | **Total Score** | |  | **STEP SEVEN** | **Action Plan** |
| **Head/Neck/Eyes** | |  |  | |  |  |  |  | | --- | --- | --- | --- | | **Corrective Action** | **Responsible Person(s)** | **Due Date** | **Status** | |  |  |  | |  |  | | --- | --- | |  | **Not Started** | |  | **In Process** | |  | **Completed** | | |  |  |  | |  |  | | --- | --- | |  | **Not Started** | |  | **In Process** | |  | **Completed** | | |  |  |  | |  |  | | --- | --- | |  | **Not Started** | |  | **In Process** | |  | **Completed** | | | |
| **Shoulders/Upper Back** | |  |  |
| **Back (Mid/Low)** | |  |  |
| **Arms/Elbows** | |  |  |
| **Hands/Wrists/Fingers** | |  |  |
| **Legs/Feet** | |  |  |
| **Other Factors** | |  |  |
| **Discomfort Survey** | |  |  |
| **TOTAL SCORE**  **SCORING KEY: LOW: 0 to15 MOD: 16 to 30 HIGH: > 30** | |  |  |

|  |  |  |
| --- | --- | --- |
| **CURRENT MAJOR STEPS** | **ERGONOMICS ISSUES** | **POTENTIAL SOLUTIONS** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| **MISC NOTES** | | |
| **FOLLOW-UP** | | |
|  | | |

[www.ergosystemsconsulting.com](http://www.ergosystemsconsulting.com) 952-401-9296