


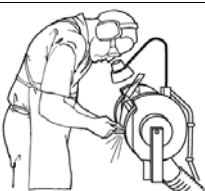






**Hazard Zone Checklist** - Jobs with intense activities like these, will likely cause sprains and strains.

For each "caution zone job" find any physical risk factors that apply. If a hazard exists, you can make the job safer by reducing the risk factor below the hazard level.

Movements or postures that are a regular part of the job.	Action required 	Job:  Date:	No. of employees in these jobs?
<b>Awkward Posture</b>		<b>Comments/Observations</b>	
	<b>1.</b> Working with the hand(s) above the head, or the elbows above the shoulders	More than <b>4 hours total</b> per day	<input type="checkbox"/>
	<b>2.</b> Repeatedly raising the hand(s) above the head, or the elbow(s) above the shoulder(s) more than once per minute	More than <b>4 hours total</b> per day	<input type="checkbox"/>
	<b>3.</b> Working with the neck bent more than 45° (without support or the ability to vary posture)	More than <b>4 hours total</b> per day	<input type="checkbox"/>
	<b>4.</b> Working with the back bent forward more than 30° (without support or the ability to vary posture)	More than <b>4 hours total</b> per day	<input type="checkbox"/>
	<b>5.</b> Working with the back bent forward more than 45° (without support or the ability to vary posture)	More than <b>2 hours total</b> per day	<input type="checkbox"/>
	<b>6.</b> Squatting	More than <b>4 hours total</b> per day	<input type="checkbox"/>
	<b>7.</b> Kneeling	More than <b>4 hours total</b> per day	<input type="checkbox"/>


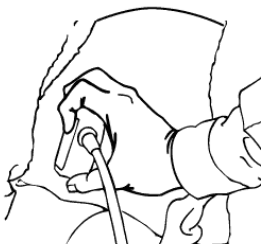
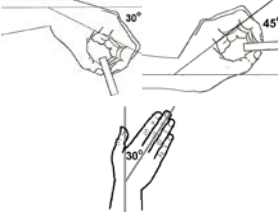



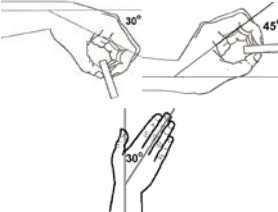
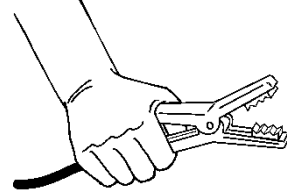
# High Hand Force

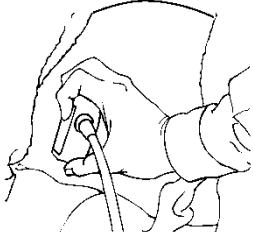
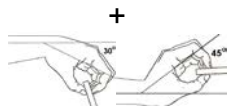



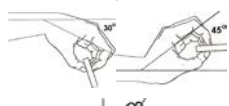
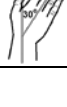

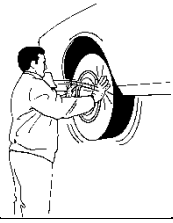
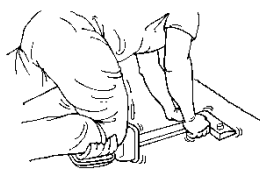
Action required



# Comments/Observations

**Pinching** an unsupported object(s) weighing 2 lbs or more per hand, or pinching with a force of 4 lbs or more per hand (comparable to pinching a half a ream of paper)

<p>8.</p> 	<p>+ Highly repetitive motion</p>	<p>+ More than <b>3 hours</b> <i>total</i> per day</p>	<input type="checkbox"/>
<p>9.</p> 	<p>+ </p>	<p>+ More than <b>3 hours</b> <i>total</i> per day</p>	<input type="checkbox"/>
<p>10.</p> 	<p>No other risk factors</p>	<p>+ More than <b>4 hours</b> <i>total</i> per day</p>	<input type="checkbox"/>
<p><b>Gripping</b> an unsupported object(s) weighing 10 lbs or more per hand, or gripping with a force of 10 lbs or more per hand (comparable to clamping light duty automotive jumper cables onto a battery)</p>			
<p>11.</p> 	<p>+ Highly Repetitive motion</p>	<p>+ More than <b>3 hours</b> <i>total</i> per day</p>	<input type="checkbox"/>
<p>12.</p> 	<p>+ </p>	<p>+ More than <b>3 hours</b> <i>total</i> per day</p>	<input type="checkbox"/>
<p>13.</p> 	<p>No other risk factors</p>	<p>+ More than <b>4 hours</b> <i>total</i> per day</p>	<input type="checkbox"/>

<b>Highly Repetitive Motion</b>		<b>Action required</b> ✓	<b>Comments/ Observations</b>
<b>Using the same motion with little or no variation every few seconds (excluding keying activities)</b>			
<b>14.</b>	 <div style="display: flex; justify-content: center; align-items: center; gap: 10px;">  <p>+</p>  <p>+</p> </div> <p style="text-align: center;">High, forceful exertions with the hand(s)</p>	<p>+</p> <p>More than <b>2 hours total</b> per day</p> <input type="checkbox"/>	
<b>15.</b>	 <p style="text-align: center;">No other risk factors</p>	<p>+</p> <p>More than <b>6 hours total</b> per day</p> <input type="checkbox"/>	
<b>Intensive keying</b>			
<b>16.</b>	 <div style="display: flex; justify-content: center; align-items: center; gap: 10px;">  <p>+</p>  <p>+</p> </div>	<p>+</p> <p>More than <b>4 hours total</b> per day</p> <input type="checkbox"/>	
<b>17.</b>	 <p style="text-align: center;">No other risk factors</p>	<p>+</p> <p>More than <b>7 hours total</b> per day</p> <input type="checkbox"/>	
<b>Repeated Impact</b>		<b>Action required</b>	<b>Comments/ Observations</b>
<b>18.</b>	 <p style="text-align: center;">Using the hand (heel/base of palm) as a hammer more than once per minute</p>	<p>+</p> <p>More than <b>2 hours total</b> per day</p> <input type="checkbox"/>	
<b>19.</b>	 <p style="text-align: center;">Using the knee as a hammer more than once per minute</p>	<p>+</p> <p>More than <b>2 hours total</b> per day</p> <input type="checkbox"/>	

# Calculator for Analyzing Lifting Operations

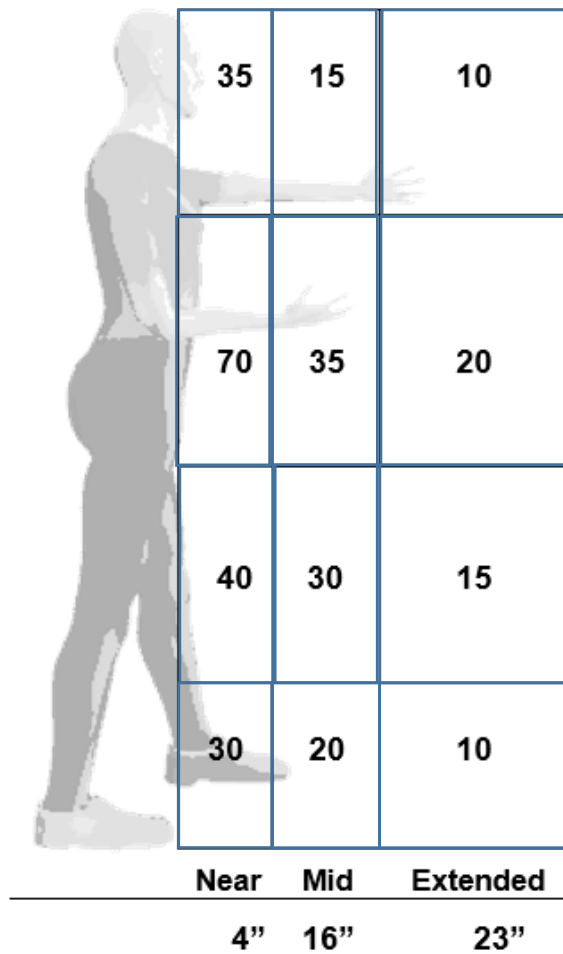
Company   
 Job

Evaluator   
 Date

**1** Enter the weight of the object lifted.

Weight Lifted  
  
 Lb.

**2** Circle the number on a rectangle below that corresponds to the position of the person's hands when they begin to lift or lower the objects.



You can find web and app versions of this calculator here:  
<https://osha.oregon.gov/OSHAPubs/apps/liftcalc/lift-calculator.html>

**3** Circle the number that corresponds to the times the person lifts per minute and the total number of hours per day spent lifting.

**Note:** For lifting done less than once every five minutes, use 1.0

How many lifts per minute?	How many hours per day?		
	1 hr or less	1 hr to 2 hrs	2 hrs or more
1 lift every 2-5 min	1.0	1.0	0.85
1 lift every min	0.95	0.95	0.7
2-3 lifts every min	0.90	0.85	0.6
4-5 lifts every min	0.85	0.7	0.5
6-7 lifts every min	0.6	0.5	0.35
8-9 lifts every min	0.4	0.30	0.15
10+ lifts every min	0.2	0.1	0.05

**4** Circle 0.85 if the person twists 45 degrees or more while lifting.

Otherwise circle 1.0

**5** Copy below the numbers you have circled in steps 2, 3, and 4.

<input type="text"/>	X	<input type="text"/>	X	<input type="text"/>	=	<input type="text" value="Lifting Limit"/>
Step 2		Step 3		Step 4		<input type="text" value="lb."/>

**6** Is the Weight Lifted (1) less than the lifting Limit (5)?

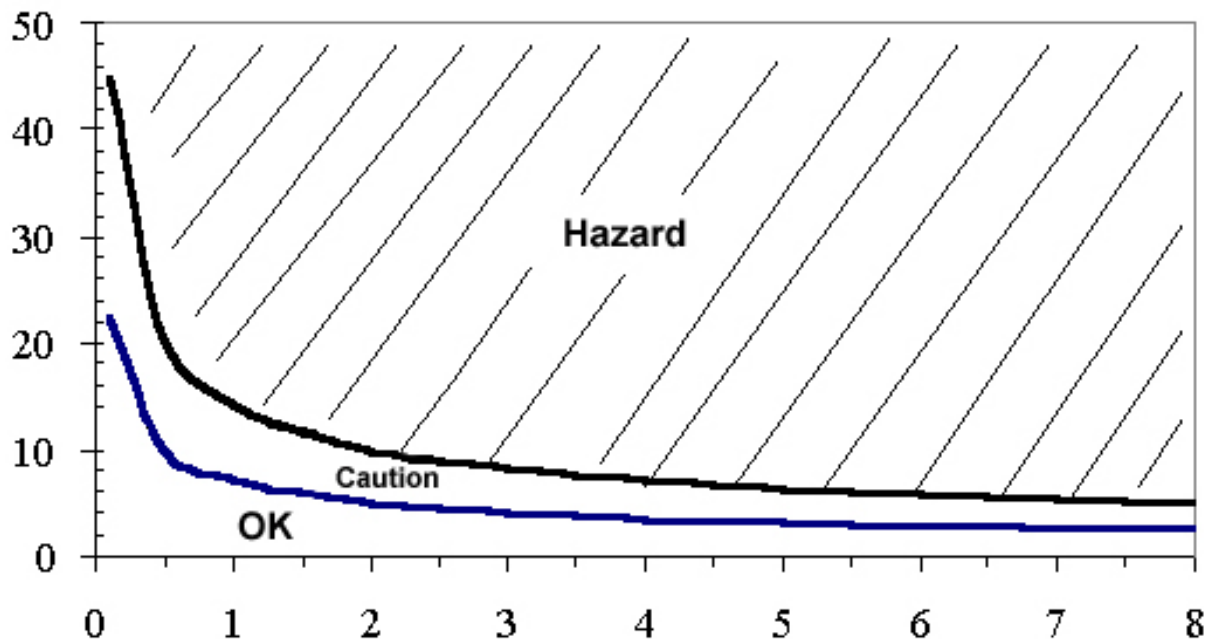
**Yes – OK**  
**No – HAZARD**

## Calculator for Hand-Arm Vibration

- Find the vibration value for the tool. (Get it from the manufacturer or look it up at this website [add URL]). On the graph below mark the point on the left side shown as Vibration value.
- Find out how many total hours per day the employee is using the tool and mark that point on the bottom of the chart below.
- Trace a line into the graph from each of these two points until they cross.

Vibration
$m/s^2$

Duration
Hrs.



#### 4. Interpretation

- If that point lies in the crosshatched "Hazard" area above the upper curve, then the vibration hazard should be reduced below the hazard level or to the degree technologically and economically feasible.
- If the point lies between the two curves in the "Caution" area, then the job remains as a "Caution Zone Job."
- If the point falls in the "OK" area below the bottom curve, then no further steps are required.

Note: The caution limit curve (bottom) is based on an 8-hour energy-equivalent frequency-weighted acceleration value of 2.5 m/s<sup>2</sup>. The hazard limit curve (top) is based on an 8-hour energy-equivalent frequency-weighted acceleration value of 5 m/s<sup>2</sup>.