

# Ergonomic Screening Tool

## Assembly Task Evaluation



Location: \_\_\_\_\_ Date: \_\_\_\_\_ Job/Task: \_\_\_\_\_

Please download this form as a master copy using the “Save As” feature. Please check back periodically to ensure you have the most up-to-date master version. This screening tool has been designed to identify common ergonomic problems found during assembly tasks. See the last page of this tool for risk factor definitions.

Risk Factor	Observation/Evaluation	Score	Comment (Use “Additional Comments” Section if Needed)
A. Hand/Arm Repetition	<input type="checkbox"/> Low (0) <input type="checkbox"/> Moderate (1) <input type="checkbox"/> High (2)		
B. Force	<input type="checkbox"/> Low (0) <input type="checkbox"/> Moderate (1) <input type="checkbox"/> High (2)		
C. Continuous Task Duration	<input type="checkbox"/> Low (0) <input type="checkbox"/> Moderate (1) <input type="checkbox"/> High (2)		
D. Awkward Postures	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)		
E. Static Postures/Holds	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)		
F. Contact Stress	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)		
G. Horizontal Reach	<input type="checkbox"/> Low (0) <input type="checkbox"/> Moderate (1) <input type="checkbox"/> High (2)		

# Ergonomic Screening Tool

## Assembly Task Evaluation, Continued

Risk Factor	Observation/Evaluation	Score	Comment
H. Twist at Waist	<input type="checkbox"/> Low (0) <input type="checkbox"/> Moderate (1) <input type="checkbox"/> High (2)		
I. Object Weight (lbs)	<input type="checkbox"/> Less than 6 (0) <input type="checkbox"/> 6-16 (1) <input type="checkbox"/> Over 16 (2)		
J. Poor Workstation Design	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)		
K. Environmental Factors	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)		
L. Unusual Object or Other Features	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)		
<b>Total Score: (max 18)</b>			

Possible Solution	Observation/Evaluation	Comment
M. Automated Material Handling Equipment	<input type="checkbox"/> Yes <input type="checkbox"/> No	
N. Floor Improvements	<input type="checkbox"/> Yes <input type="checkbox"/> No	
If needed, include additional comments here:		

# Ergonomic Screening Tool: Assembly Task Evaluation

## Definitions

Risk Factor	Definition
<b>Hand/Arm Repetition</b>	The number of similar hand/arm motions performed during the assembly task. For example: cutting, stripping and twisting connections onto a length of wire. Select from the following: <b>Low</b> : Less than 10 repetitions per minute; <b>Moderate</b> : 10-20 repetitions per minute; <b>High</b> : More than 20 repetitions per minute.
<b>Force</b>	This is the physical effort required to perform a task, including control of materials/tools. The amount of force varies by the type of grip, object weight, neutral or non-neutral position, tool selection and the type of activity. Select <b>High</b> if observable signs of physical effort are noted, <b>Low</b> if little or no physical effort is apparent and <b>Moderate</b> for levels between high and low. Use the comments section to outline which body parts are affected (e.g. hands, wrist, arms, shoulders, back, legs, etc.).
<b>Continuous Task Duration</b>	How long is the task continuously performed without interruption? <b>Low</b> : less than 1-hour; <b>Moderate</b> 1-3 hours. <b>High</b> : more than 3 hours.
<b>Awkward Postures</b>	A normal posture for assembly work is arms/shoulder relaxed with elbows resting at sides, both feet on the ground, hands in front and the worker facing the task. An awkward posture is bending, twisting, reaching, stooping, leaning forward on one foot, kneeling, etc. When this is routinely required, select <b>YES</b> . Use the comments section to note the affected body part(s) - e.g. hands, wrist, arms, shoulders, neck, back, legs, etc.
<b>Static Postures/Hold</b>	This can occur with long duration tasks, or when the task or work surface is too high, causing raised shoulders and elbows, or when it is too low, causing forward bending of the head and trunk. If the task, including control of materials/tools, requires a posture that puts pressure on the same muscle, tendon and joint groups, select <b>YES</b> .
<b>Contact Stress</b>	Contact stress or direct pressure occurs during task assembly when a body part is pressed against an object, hard surface or part of the workstation.
<b>Horizontal Reach</b>	The primary assembly task activity should be done within 18 inches of the spine, and horizontal reaches for parts or tools should be within 24 inches. Select from the following: <b>Low</b> : less than 10% of assembly work is outside these ranges; <b>Moderate</b> 10-50% is outside these ranges; <b>High</b> : more than 50% is outside these ranges.
<b>Twist at Waist</b>	Keeping the task, tools and materials within 30° in front of the worker limits the need to twist at the waist. To illustrate: picture a traditional clock face with the worker facing forward as 12. Most of the work should occur between where the 11 and 1 would be. Select from the following: <b>Low</b> : less than 25% of work is outside this range; <b>Moderate</b> 25-50% is outside this range; <b>High</b> : more than 50% is outside this range.
<b>Object Weight (lbs)</b>	Measure weight of materials/tools used during the assembly tasks. Use the heaviest weight for the assessment and note variations in the comments.
<b>Poor Workstation Design</b>	Select <b>Yes</b> if the workstation contributes to noted risk factors such as awkward postures, reaches, holds, twisting or contact stress, or if it is not adjustable or properly designed for the worker. Optimal workstation heights range between 26" to 44" for standing and 21" to 31" for sitting.
<b>Environmental Factors</b>	Environmental factors, such as Humidity, Heat or Cold Temperatures (>85° F or below 45° F), Noise above 80 dB and Vibration may impact heart and breathing rates, restrict blood flow to muscles, increase fatigue or lead to nerve damage. If present, select <b>YES</b> and note the type(s) of environmental factor in the comments.
<b>Unusual Object Features</b>	Select <b>Yes</b> if the assembly object, material or tool has poor ergonomic features not captured elsewhere, such as if it is slippery, bulky, off-center, prone to shift, requires a one-handed lift, etc. Note the features in the comments section.

## Assembly Task - 5 Light Bulb Moments

<b>The force is against you.</b> Force is the amount of physical effort required to perform a task, control a tool or operate a piece of equipment. The greater the force, the greater the likelihood of injury. Modify the task, tool, grip or weight to keep force at a minimum.	<b>Don't be awkward.</b> Avoid awkward body postures and positions (e.g. bending, twisting, reaching, stooping, kneeling, etc.). When your body is in an awkward position, muscles operate less efficiently, and more force must be expended to complete a task.	<b>Don't overextend yourself.</b> Try to keep all assembly work activities between below the shoulders and above the waist. And remember to keep items within easy reach.	<b>Remain neutral.</b> Maintain the natural S-curve of your spine, keep your neck aligned, your elbows at your side, your wrists straight and have both feet comfortably resting on a soft surface. This allows the body to naturally align to provide for comfort of movement.	<b>Be adjustable.</b> Make workstations adjustable to accommodate workers of different heights and weights. Proper workstation design allows workers an opportunity to choose standing or sitting while completing work.
--	--	---	---	--