

Line of Fire hazards refer to situations where workers are at risk of being directly in the path of moving objects, hazardous energy, or equipment that could cause injury.

If a worker is in the line of fire, it means they are in the path where they could be injured due to moving objects or the unexpected release of energy.

Being in the line of fire doesn't necessarily mean someone will definitely be injured, but it means that if they or someone else isn't paying attention, or if there is a misfire or malfunction, they are in the path of that hazard and could be seriously injured or killed.



When considering line of fire hazards, there are many common areas of concern, including:



- Worksites with moving equipment like forklifts, cranes, or vehicles
- Sites where loads are lifted or suspended
- Jobs where power tools and machinery are being used
- Facilities with pressurized contents like pipes, hoses, cylinders, or tanks
- Areas underneath elevated work platforms with dropped object hazards
- Maintenance and repair operations that requires lockout/tagout

There are three main categories of line of fire hazards. When thinking about potential line of fire hazards, this is a good way to remember them.

1. Object in Motion: Injuries occur from objects moving towards a worker, including rolling, sliding, falling, or swinging objects
2. Potential Energy: Hazards involving the unexpected release of stored energy, such as a snapped tensioned cable or a burst pipe
3. Equipment Malfunction: Situations where equipment failure could lead to components being ejected towards a worker unexpectedly



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Examples of being in the line of fire include:

- standing beneath suspended loads
- walking in front of or behind moving equipment
- being near pressurized lines that could rupture
- working in front of someone using a nail gun
- positioned near doors that could swing outward
- using a grinding wheel without a proper guard
- repairing machinery that is not locked out properly
- putting your hands in or near a tool or machine's point of operation



Line of Fire Incidents



A worker positioned below a crane with a heavy load overhead when a strap breaks



A site inspector near an unstable high-pressure pipeline that ruptures



A construction worker too close to the demolition gets struck by debris



A warehouse worker near improperly stacked materials that collapses



A laborer standing downstream of a pipe blockage that suddenly clears and ejects forcefully



A flagger for a work zone stands in the path of moving traffic when a vehicle doesn't slow down



A worker cleaning a machine that is not powered off and it activates unexpectedly



A landscaper cleaning up under a tree as large tree limbs are being cut down



A roofer near the edge of a building when a gust of wind causes unsecured materials to slide



A worker standing in the trajectory of a backhoe swing area as the operator rotates it



A project manager walks under a scaffold when a tool falls from the elevated work platform



A line worker sticks his hand into a machine to clear a jam and the machine engages

In addition to paying attention to your surroundings for your own safety, it's important that all workers do not create unnecessary line of fire hazards for others in the work area.

- Conduct pre-operation checks on equipment to ensure all safety features are engaged.
- Do not disable or remove protective shields or machine guarding.
- Secure loose materials that might shift, drop, fall, or otherwise become airborne.
- Communicate clearly with coworkers, especially when moving heavy loads or operating machinery.
- Add toe boards on elevated work platforms to prevent tools and materials from falling into the area below.
- Report line of fire hazards including unsafe conditions, malfunctioning tools, missing guards, and near misses.
- Use taglines properly when positioning loads lifted by a crane.
- Maintain clean and organized work areas to allow easy access to equipment and to prevent accidents related to tripping, slipping, or falling objects.
- Always use the correct tool for the task.



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Situational awareness is key for workers to stay out of the line of fire on any job or in any workspace.

- Always be aware of your surroundings and the operations in your vicinity.
- Follow designated walkways and avoid taking shortcuts through operational areas.
- Evaluate line of fire hazards when completing a Job Hazard Analysis or hazard assessment.
- When tools like nail guns are being used, set up operations so that other workers will not be able to walk or work in the line of fire.
- Observe any barriers and guards that are set up as physical shields from potential line of fire hazards.
- Position yourself in a way to avoid being directly in front or behind moving equipment.
- Verify that energy sources are isolated (locked out/tagged out) before performing maintenance. (Only trained and authorized personnel are allowed to complete maintenance and repairs.)
- Wear required personal protective equipment (PPE) – it is your last line of defense against an unexpected line of fire hazard.



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