

Engineer



Required PPE (click icon for PPE examples and information)



Safety Harness



Hearing Protection



Safety Glasses



Foot Protection



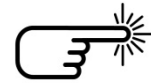
Hand Protection



Safety Helmets



Respirator



[Click here to view Required/Recommended Safety Trainings](#)

Work Duties	Hazards	Recommendations
Equipment Maintenance	Electric shock, parts shooting and striking worker, getting caught in equipment, cuts from sharp edges	Shut off any power source before working, Have appropriate PPE depending
Working in air handlers and changing air filters	Inhalation of dust, dust or foreign objects in eyes, fiberglass irritation.	Wear dusk mask and safety mask.
Working with power tools	Cuts, abrasive, electric shock, injury form flying debris, tripping over power cords	Keep tools in good condition.
Using hand tools	Cuts, pinches, smashes, punctures, severing of fingers.	Keep tools in good condition. Inspect tools before use. Wear safety glasses. Work away from yourself. Use normal caution required for all hand tools.
Working around electricity.	Electric shock; electrocution.	Shut off power to work area. Use lock-out device to ensure power is not inadvertently switched on. Always test before beginning work to verify that power is off. Remove tools and other metals from body. If you must work with electricity on, wear safety glasses and leather gloves. Have coworker with you in case there is a problem. If work area is wet, clean up standing water before working with electricity; wear rubber boots and gloves.

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Work Duties	Hazards	Recommendations
Working on roofs	Slipping and falling, high winds, getting stranded on roof if working alone	Walk carefully not too close to the edge. If possible avoid working on really windy or wet/icy days. Keep doors propped open with a 2-way radio.
Using scaffolding	Scaffolding collapsing, slipping/falling from scaffolding	Inspect all equipment before using and make sure it is assembled correctly and all wheels are locked. Use safety rails and a safe way down
Using ladders or step-ladders	Ladder collapsing; Slipping and falling from ladder	Inspect ladder before use. Use ladder at proper height. Make sure the ladder is assembled, locked and on level ground. Do not exceed weight limit for ladder. Do not stand on the top or top rung of ladder and make sure a co-worker is holding ladder if any higher than a step-ladder.
Working in mechanical rooms	Explosions from gas lines; burns from steam, hot water lines; slipping on water or oil; tripping over materials being stored; loud noise	Be aware of odors and evacuate if you smell gas; be aware of your surroundings, clean up any standing liquid on floor; walk carefully; wear earplugs if needed.
Working in confined spaces	Lack of oxygen or overexposure to methane gas.	Before working in confined area, verify that it is safe by monitoring air (get confined space permit as required). While working, always ventilate area using fan. Always have at least one person outside confined area to monitor safety of those working inside.
May work with materials containing asbestos.	Could cause possible health issues if inhaled or ingested	Never disturb materials containing asbestos unless properly trained. Always use appropriate exposure control methods and wear designated PPE.

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Work Duties	Hazards	Recommendations
Working with steam heat, hot water pipes	Severe burns, inhalation of steam.	Whenever possible, shut off steam in work area several hours before beginning job. Look at gauges before beginning work to verify that they are working properly. Be aware of steam leaks. Drain systems and/or pump before working on them. Release pressure slowly by nicking pipe. Pull out pump slowly and put a barrier between you and the pump to protect against steam and hot water.
Working with pneumatic parts	Getting sprayed with hot or cold water, steam, refrigerates. Injuries from shooting parts from air build-up.	Slowly open valves to release pressure and wear safety glasses.
Storing or transporting compressed gas cylinders	Explosion of compressed gas, rupture of valve	Do not allow cylinder valves or the regulators to come in contact with grease, oil, or other lubricants. Always install a protective valve cover and secure cylinders to a stand or wall, wear proper PPE.
Soldering and brazing using oxygen/acetylene outfit.	Explosion, burns, inhalation of fumes	Check hose and connections for leaks prior to using, work in well-ventilated areas, Don't solder around flammable materials wear proper PPE and burn away from yourself, use correct solder for the job and have a person stand by as a fire watch.
Starting up and operating chillers: turning on pumps, opening valves, and checking gauges.	Back Strain, overexertion, burns.	Take time to open to the valves, wear proper PPE especially gloves.
Heavy lifting	Use proper lifting techniques, limit duration of repetitive motion.	Always know your weight limit, lift with your legs, get help if needed.