

The best way to prevent shop-related injuries is in the planning and design stage of a shop. However, if you cannot build a new shop with all the “best” design features, the following guidelines should be considered:



LIGHTING

- Ensure good natural lighting.
- Provide sufficient overhead lighting to illuminate the general working and walking areas.
- Consider appropriate task lighting needs and safeguards.



VENTILATION

- Always allow for adequate ventilation considerations associated with operations such as welding, running engines, chemical usage/storage, fuels, and fume/mist/vapor generations.



HEATING & COOLING

- Select the appropriate type of heating/cooling system for your work environment.
- Place units where they are efficient, but not likely to be near other equipment or flammables/combustibles.
- Make sure equipment is safely installed to manufacturer’s requirements.
- Ensure that there is an appropriate air supply to remove exhaust and supply adequate oxygen.
- Make certain that safety devices that automatically turn off units are provided and used where appropriate.
- Check that an emergency shut-off is installed, visible and easy to access.



TOOLS

- Supply and maintain the proper tools and safety devices such as hand tools, welders, hoists/jack stands, wheeled carts, power tools and spill-cleanup supplies.
- Replace any damaged or misshapen tools.



EMERGENCY SITUATIONS

- Provide and train personnel on the use of fire extinguishers.
- Make sure that emergency contact numbers are posted and easily accessible.
- Maintain an adequately supplied first aid kit.



WIRING

- Assure that the power supply is adequate for the work to be performed. Overloading circuits is ill advised and dangerous.
- Supply enough outlets so extension cords are not needed.
- Hard wire fixed equipment.
- Use explosive-proof wiring and accessories where an explosion can occur.



LOCATION

- Make convenient for moving equipment in and out of the shop area without overly exposing personnel not associated with shop activities.
- Place close to part storage (if not a part of the shop).
- Provide drainage that doesn't pollute the environment and maintains a dry work area.
- Ensure that floor and exterior apron provide a solid foundation for the work provided.



GENERAL SHOP SAFETY GUIDELINES

- Do not wear gloves around powered equipment if the gloves can be caught in moving parts.
- Confine long hair in a net or hat to prevent entanglement in machinery.
- Never operate any shop machine without proper instruction. Never operate a machine without proper guards in place.
- Keep floor and bench areas clean and dry. Avoid working on oily or wet floor areas.
- Guard against electrical shock. Keep cords and tools clean and serviceable.
- Replace damaged ground tips on plugs. Install ground wires on ungrounded electrically powered tools.
- When welding, never look at an electric arc without using a welding helmet. Helpers should wear welding goggles. Wear proper eye protection when welding or burning with acetylene.
- Bench grinders should keep tool rest adjusted within 1/8 inch of surface of wheel. Keep stones dressed square. Always use eye protection.
- Support raised machines, equipment, or vehicles on sturdy blocks. Do not depend on jacks.
- Flammable liquids should be stored in a flammable-liquid cabinet or proper outdoor storage area.
- Return all tools to their proper storage area.
- Oily rags should be stored in a metal container with a tight-fitting lid.
- A clearly marked and easily accessible ABC-Type fire extinguisher should be mounted in the shop.
- If using an extension cord, make sure to use the correct type and do not daisy chain extension cords together. Do not use a damaged or frayed cord – replace it.