



RISK MANAGEMENT

Automobile Services Advantage Program

ASAP RISK MANAGEMENT ADVISORY
Utica National Insurance Loss Control Department Bulletin

Eye and Face Protection for Garage Operations

Work site injuries often involve automobile repair-related workers, such as welders, mechanics and machine operators. 100,000 workers each year are disabled because of vision loss due to injury. Many of the thousands injured each day didn't think they needed eye protection or wore eye protection inappropriately. Eye injuries may be the most common threat to car mechanics, but in those garages that require safety goggles be worn at all times, such injuries have all but disappeared.

Results from a recent study show that nearly one in ten adults going to an emergency room with an injury had sustained an injury to the eye. Welding and grinding are responsible for 29% of all eye injuries. Approximately one half (49%) of those injured through welding-related activities, and one-third (33%) of those injured through grinding-related activities, were not wearing any form of eye protection at the time of the injury. For those that were grinding, objects commonly flicked underneath or through the sides of the safety eyewear (particularly safety glasses) because of the lack of side shields. For welders, eye injuries commonly occurred because the protective equipment was not worn throughout the entire welding process. In many cases (25% of welding and 6% of grinding cases), were not wearing personal protective equipment when they were injured while walking past or assisting others who were performing these activities. In the garage, battery acids, sparks and debris from damaged batteries or improperly jump-starting an automobile can severely damage the eyes. Learn the proper way to jump-start an automobile, and using protective goggles can prevent many of these injuries.

Eye injuries that result from a foreign object puncturing the eye are caused by:

- **Flying Objects:** Bits of metal, plastic, and wood are natural dangers in auto shops.
- **Tools:** Any tool that has a narrow point, such as a drill bit or a screwdriver, is narrow enough to bypass the protection of the orbital socket.
- **Particles:** Dust and fibers from hazardous materials can either float into the eye or can be transferred there due to hand to eye contact.
- **Chemical Damage:** Cutting fluids, fluxes, battery acids, and other strong chemicals used in the garage are hazardous to the eyes.
- **Light and Radiation Damage:** Exposure to arc welding or strong UV light can contribute to age-related macular degeneration (damage the retina) and cataracts. Which can cause limitations in visibility or, in some cases, total blindness.

In the garage, consider the work you will be doing and wear safety goggles to shield your eyes from flying fragments, dust particles, sparks and splashing chemicals. Many objects can fly into your eyes unexpectedly and cause an injury. Also, managers of machine shops and garages must be conscientious when it comes to eye protection, making protective eye wear mandatory for workers and as well as visitors.

The following steps are offered for managers and supervisors to follow to ensure workplace eye safety:

- Perform a facility eye safety analysis.
- Choose light, well-fitting glasses with side shields when there is a hazard from flying objects.
- Face shields must always be used in conjunction with primary eye protection (safety glasses or goggles).
- Face shields shall be used in operations where the face needs protection and should be worn to protect eyes and face against flying particles, metal sparks, and harmful liquid splashes, mist or vapors.
- Welders' shields must be worn to protect workers' eyes and face from infrared or radiant light burns, flying sparks, metal spatter and slag chips encountered during welding, brazing, soldering, resistance welding, bare or shielded electric arc welding and oxyacetylene welding and cutting operations.
- For employees who wear prescription lenses, eye protectors shall either incorporate the prescription in the design or fit properly over the prescription lenses.
- Eye protectors shall be distinctly marked to identify the manufacturer and the ANSI certification. All eye and face protectors shall comply with ANSI Z87.1-2003.
- Equipment fitted with appropriate filter lenses shall be used to protect against light radiation. Tinted and shaded lenses are not filter lenses unless they are marked or identified as such.
- Establish a 100 percent mandatory eye protection program throughout the entire garage/shop.
- Plan for emergencies by having first aid procedures, eyewash stations and trained personnel.
- Train and educate on an ongoing basis.

OSHA's Eye and Face Protection at <http://www.osha.gov/SLTC/eyefaceprotection/index.html> Safety and Health Topics page is a good resource for additional information on preventing workplace eye-related injuries.