

Job Name: \_\_\_\_\_ Job Site Location: \_\_\_\_\_

Date: \_\_\_\_\_ Start Time: \_\_\_\_\_ Finish Time: \_\_\_\_\_ Foreman/Supervisor: \_\_\_\_\_

## Topic 141: Safety for Mechanics

**Introduction:** During a typical workday in a vehicle repair shop, a mechanic will encounter and deal with a wide variety of safety and health hazards. Whether working in a shop or out in the field, a competent vehicle/equipment technician must understand all the hazards in the work area and do everything possible to avoid them. Safe work practices are an important part of a vehicle repair technician's job description. Everyday hazards in the shop require that nearly all types of Personal Protective Equipment be worn during one operation or another.



**Eyes** — The most frequent causes of eye injuries is to wear appropriate eye protection. An important point about eye injuries is that almost all of them are preventable.

**Breathing** — protection must be used, especially when working on brakes and clutches (some discs and pads from these components produce asbestos containing dust). HEPA filtered vacuuming should be done during disassembly. Never blow dust off of brake assemblies.

**Ears** — Vehicle repair shops can be noisy places. Equipment such as impact wrenches, grinders, and engine operation can cause high noise levels. If you are subjected to high noise levels every day, your hearing can slowly disappear. There are two basic types of hearing protection devices: Earmuffs and Earplugs. They must fit properly in order to work correctly. For extreme noise levels, earmuffs and earplugs can be worn together.

**Hands** — There are two parts to protecting the hands. One is to keep your hands out of dangerous areas. Rotating parts such as the belts and fans on the front of an engine are examples of hand danger areas. Identify hand danger areas and keep your hands clear. The second part of hand protections is to wear the appropriate gloves for the specific operation.



**Feet** — Always wear safety shoes or boots in the shop. Safety shoes have metal or fiberglass protection over the toe to prevent an injury if a heavy object falls on your foot. Safety shoes also have oil-resistant soles that grip slippery floors better than regular shoes.

**Dress/Grooming** — Wear the correct clothing for the trade, such as well-fitted coveralls. Avoid wearing loose clothing or jewelry that can become caught in moving machinery. A protective head covering such as a bump cap is advised when working in a pit or under an overhead hoist. If you have long hair, tie it up or keep it under a hat so it does not get caught in the moving parts of an engine or power tool.



**Lifting/Carrying** — The back is one of the most frequently injured parts of the body and there are many ungainly and heavy objects that must be handled in a vehicle shop. Most back injuries can be prevented if you use safe lifting and carrying techniques.

**Good housekeeping** — is an important safety issue because a cluttered shop is a dangerous shop. All work surfaces should be kept clean, dry and orderly. The work area should be cleaned after each job to prevent the buildup of oil, coolant or grease on the floor that can cause slips that could result in serious injuries. Dirty or oily rags must be stored in a sealed metal container and disposed of properly.

**Hand tools** — Misuse of hand tools is a leading source of accidents in the shop. Know what a tool has been designed to do and use it properly.

**Power tools** — Portable and stationary power tools are powered by electricity or air (pneumatic). Never operate a power tool without being properly trained. Always use a tool for the job it was designed to do and keep all guards in place and in working order.

**When using a floor jack** — to lift a vehicle, always use jack stands and never rely on the jack alone. Use factory recommended lift points when jacking.

**Hydraulic lifts** — must be used properly to prevent a vehicle from falling off. Always make sure the vehicle is properly placed on the lift before raising it and always use the safety locks to prevent the lift from coming down unexpectedly. Never operate a lift if it is not working properly.

**Driving a vehicle** — into the shop or running the engine inside the shop can be hazardous. Always follow safe work procedures such as setting the hand brake, putting the transmission selector in PARK, blocking the wheels, and ventilating the exhaust. Never run an engine in the shop without properly venting the exhaust fumes to the outside or to a dedicated ventilation system for exhaust gas.



**Fires** — are a common hazard in the vehicle shop because of the many flammable materials used. Know where fire extinguishers are located and how to select and use the correct fire extinguisher on a fire. Avoid build-up of flammable material such as oily rags, and etc.

**Chemicals/Waste materials** — such as cleaning solvents and hazardous materials such as asbestos must be handled properly. Always use safe work procedures for the material you are working with and wear proper protection. The containers for hazardous chemicals have a label that describes precautions and first aid information. Always read the label before using any chemical. Material Safety Data Sheets (MSDS) for each chemical must be on hand to provide detailed safety information on hazardous materials used in the shop. Dirty solvent, used engine oil and coolant, used batteries, and vacuum cleaner bags with brake and clutch dust are examples of hazardous shop waste.



**Conclusion:** Mechanics must exercise caution at all times when working on vehicles and equipment. Mechanics deal with such an assortment of potential hazards that a few moments of inattention or distraction can easily result in an accident. Unauthorized personnel should always be kept clear of the mechanic's work zone. Proper training in tool and shop equipment use, as well as safe work practices will help mechanics work safely.

### Work Site Review

Work-Site Hazards and Safety Suggestions: \_\_\_\_\_

Personnel Safety Violations: \_\_\_\_\_

**Employee Signatures:**

*(My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent job-related injury or illness.)*


*These guidelines do not supercede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.*