VEHICLE MECHANICS SAFETY RULES, POLICIES, AND PROCEDURES

The following sections provide general guidelines and requirements for vehicle maintenance safety and have been prepared to assist you based on your job descriptions and nature of work.

Automotive Service and Repair Safety Rules

GENERAL

1. Immediately report all unsafe conditions and equipment to management or to the assigned safety person.
2. Immediately report all accidents and injuries or illnesses to management.
3. Any employee known or suspected of being under the influence of alcohol or drugs will not be allowed to continue work while in that condition.
4. Practical jokes, “horseplay,” or any activity that may endanger the health or well-being of any employee, or the work operation, are strictly forbidden.

5. Keep work areas free from accumulated debris and clutter.
6. Keep aisles and walkways clear at all times.
7. Stairways must be kept free from slip and trip hazards as well as any combustibles.
8. All exit doors must remain unlocked and unobstructed during duty hours.
9. In the event of a fire, sound an alarm and evacuate the building. All employees hearing the fire alarm must evacuate the building and gather at a predetermined location.
10. Ensure that access to fire extinguishers is not blocked or obstructed by any object or materials.

11. Immediately clean up spills.
12. Use the following proper lifting procedures:
    a. Plan the move before lifting. Clear the path of any obstructions, etc.
    b. Squad down close to the load by bending the knees.
    c. Test the load for weight, balance, etc. If it is too heavy or awkward, get Assistance.

d. Keep the load closed and centered to the body and keep the back erect.

e. Get a firm grip on the load, using handles when possible. Wear gloves when lifting items with sharp edges, etc.

f. Tighten stomach muscles.

g. Lift smoothly using the legs. Don't jerk the load.

h. If it is necessary to turn with the load, pivot on the feet instead of twisting at the waist.

i. Lower the load by bending the knees.

FLAMMABLE MATERIALS AND CHEMICALS

1. Smoking is prohibited near flammables and allowed in designated areas ONLY.
2. Solvents and all flammable liquids must be stored in appropriate containers and away from heat sources.
3. All containers must be labeled with information about hazardous contents.
4. Material Safety Data Sheets (MSDS) are available and will be reviewed prior to using any new chemical material. The appropriate personal protective equipment must be worn (gloves, goggles, etc.).
5. MSDS sheets are kept outside the Mechanic's lunchroom in the center of the shop area.
6. Always clean up and dispose of spills promptly when working with a known substance.
7. Eyewash stations must be available, in working order, and have unobstructed access.
8. Rags contaminated with oil, grease, chemicals, etc., must be stored in a metal container with a self-closing lid.

REPAIR SHOP RULES

1. Wear safety eyewear when working in the shop area.
2. When shop bay doors are closed, use a flexible exhaust hose to vent engine exhaust outside.
3. When handling hot automotive parts, wear leather gloves or use heat-resistant pads.
4. Dump gasoline or other liquid chemical waste into approved containers labeled "FLAMMABLE WASTE."

5. Compressed air used for cleaning purposes must not exceed 30 psi. Wear eye protection when working with compressed air.
6. When lifting batteries or other heavy objects from an engine compartment, use the following guidelines:

   a. Press thighs against the fender to brace the body.
   b. Grasp the object firmly with both hands.
   c. Keep the back as erect as possible and the load as close as possible, with elbows close to the body.
   d. Turn by pivoting the feet instead of twisting at the waist.
   e. Lower the object to the workbench or other surface by bending the legs as opposed to the back.

HYDRAULIC JACKS

1. Set the grooves of the jack head under the vehicle so the frame rests along the grooves.
2. Know the rating capacity of the jack and never exceed it.
3. Chock the vehicle wheels before raising the vehicle with the jack.
4. Clear all tools, equipment, etc., before lowering the vehicle.

AUTOMOTIVE LIFTS

1. Ensure the area is free of tools, equipment or other debris before driving a vehicle into the service bay.
2. Ensure lift arms and supports are away from tires before driving a vehicle into the service bay.
3. Inspect the lift and its components for cracks or any damage on a regular basis.
4. Never stand in front of a vehicle being driven into a service bay.
5. Never use wood or concrete blocks as a substitute for an extender.
6. Chock wheels or any vehicle on a runway lift.
7. Never leave controls unattended while the lift is in motion.
8. Never “tie open” or block the lift’s control while the lift is in motion.

9. Always be alert to ensure the top of a vehicle has enough clearance to avoid hitting ceiling fixtures.

10. Do not modify the lift with any components not approved by the manufacturer.
11. If a vehicle starts to slip off the lift, run in the opposite direction of the fall. Try not to run toward a wall or fixed object to avoid being trapped between it and the vehicle.
12. Ensure tools, equipment, and debris is removed from the area before lowering a vehicle.
13. Before driving the vehicle over the lift, position arms and supports to provide unobstructed clearance. Do not hit or run over lift arms, adapters, or axle supports.
14. Load vehicle on the lift carefully. Position lift supports to contact at the vehicle manufacturers' recommended lifting points. Raise lift until supports contact vehicle and check for secure contact. Raise the vehicle approximately one foot off the ground and shake it by pushing gently on the front or rear bumper to make sure it is stable. Raise the lift to the desired working height and engage locking device.
15. Remember that the removal or installation of vehicle components may cause a critical shift in the center of gravity, resulting in vehicle instability.

ABRASIVE GRINDERS

1. All bench and pedestal grinders should be permanently mounted.
2. Always wear eye protection when operating a grinder or when in the vicinity of grinding work.
3. Do not operate a grinder that is missing tongue guards or tool rests.
4. Do not use grinding wheels that are chipped, cracked or deeply grooved.
5. Always "ring test" any new grinding wheel before installation.
6. Adjust tool rests at 1/8-inch from wheel and tongue guards at ¼-inch.
7. If a grinding wheel wobbles, discard it.
8. Never try to stop a rotating wheel with your hand.
9. Never clamp a portable grinder in a vise to use as a bench grinder.

10. Wear a respirator if the grinding operation produces quantities of dust.
11. Flammables must be kept clear of grinding operations that produce sparks.
12. Keep standing areas and walking areas free of accumulated debris, scraps, etc.

AIR COMPRESSORS

1. Follow the manufacturer's recommendations for care and maintenance procedures and intervals.
2. Always bleed the system before performing any maintenance on the pressure components.
3. Signs must be posted to warn of the automatic starting feature of compressors.
4. Compressed air used for cleaning purposes must be reduced to 30 psi or less.
5. V-belts and moving parts must be guarded to prevent employee injury.
6. Eye protection must be worn when cleaning with compressed air.

DRIVING

Employees who drive as part of their job must do all of the following:

1. Obey all federal, state, and local laws/requirements.
2. Wear a fastened safety restraint (i.e., seat belt and/or shoulder harness).
3. Never carry passengers except for authorized employees.
4. Never operate a motor vehicle while under the influence of drugs or alcohol.
5. Ensure that company vehicles receive a pre-trip inspection before being operated.
6. In the case of heavy equipment a pre-trip inspection must be performed on the equipment before operating it.
7. Notify management immediately when a traffic citation has been issued or when driving privileges have been suspended.

HAND TOOLS AND EQUIPMENT

1. Keep all cutting tools sharp.
2. Never attempt to catch a falling sharp tool.

3. Chisels with “mushroomed” heads must be ground down or taken out of service.
4. When chiseling, cutting, grinding, sanding or when any other eye hazards are present, eye protection must be worn.
5. Sharp or pointed tools such as screwdrivers, chisels, files, etc., must not be carried in pockets.
6. Do not use hand or power tools with wet, oily or greasy hands.
7. Use the correct tool for the job. For example, do not try to pull nails with pliers; instead use a claw hammer.
8. Do not use a screwdriver as a chisel or punch.
9. Do not put hands or fingers near the blade of a screwdriver when tightening a screw.
10. Do not use wrenches that are bent, cracked or have loose or broken handles.

PORTABLE POWER OPERATED TOOLS AND EQUIPMENT

1. Tools and equipment are to be used only by employees who have been properly trained and authorized to use them.
2. Electrical power tools must be the double-insulated or grounded type.

3. Never lift or carry electrical tools by the cord.
4. Do not operate electrical tools with wet hands or when standing on a wet floor.
5. Power tools with “continuous-on” power switches must be removed from service.
6. Tools with cut, frayed, or exposed wires must be repaired or taken out of service.
7. Never use extension cords or other 3-prong power equipment if the ground prong is missing.
8. Unplug powered equipment and tools before performing maintenance or service work.
9. Never disengage or override any safety guards or features on powered equipment.
10. Always disconnect pneumatic tools from the air line before making adjustments or repairs.

WELDING, CUTTING, AND BRAZING

1. Welding, cutting, and brazing equipment must only be used by trained and authorized employees.

2. All cylinders must be kept away from heat sources.

3. Cylinders must be stored with the valve end up, with valve covers attached and secured to a wall, away from objects that may strike them.

4. Always mark empty cylinders, close valves and place valve covers on cylinders.

5. Never crack a fuel gas cylinder valve near a source of ignition.

6. Stand to one side of the regulator when opening the valve.

7. When welding, wear a welding helmet with appropriate filters, welding gloves, long-sleeved shirt, long pants with cuffs outside the boots and an apron.

8. Ignite torches with friction lighters only. Do not use matches or lighters.

9. Never apply or expose oil or grease to oxygen fittings, torches, hoses, etc.

Changing Brake Shoes Which Contain Asbestos

Asbestos, a naturally occurring mineral fiber that is highly heat resistant, can cause serious health problems when inhaled into the lungs. If products containing asbestos are disturbed, thin, lightweight asbestos fibers can be released into the air and breathed in. Continued exposure can increase the amount of fibers deposited in the lung. Fibers embedded in the lung tissue over time may result in lung diseases such as asbestosis, lung cancer, or mesothelioma. It can take from 10 to 40 years or more for symptoms of an asbestos-related condition to appear. Smoking increases the risk of developing illness from asbestos exposure.

Some but not all automotive brakes and clutches available or in use today may contain asbestos. Brake and clutch dust can be seen when a brake disk, drum, clutch cover, or the wheel is removed from a car, truck, or other equipment. There are also many small dust particles that cannot be seen with the eye. If the brakes contain asbestos, the dust may contain asbestos fibers, which could be inhaled.

The potential for asbestos exposure occurs primarily during the replacement of clutch plates and brake pads, shoes, and linings. Asbestos fibers may become airborne when the asbestos-containing residue is disturbed by cleaning of the brake drum or clutch housing. Exposures are particularly prevalent when compressed air is used to clear the linings. To maintain exposure levels below .1 fibers per cubic centimeter, the following procedures are to be followed:

1. Using a water-based cleaner, spray the asbestos contaminated parts until they are thoroughly wetted. Catch the excess water in a bag.

2. Wipe the parts clean with a rag (if necessary).

3. Dispose of the rag in an “asbestos” waste plastic bag.

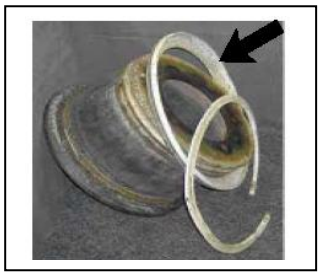
4. When the bag reaches about one-half full, notify the Supervisor so the bag can be replaced properly and disposed in accordance with Federal and local regulations. Brake and clutch dust and other asbestos waste must be collected and disposed of in sealed, impermeable containers that are properly labeled.

<u>DO NOT</u> USE AIR TO CLEAN BRAKE LININGS

5. Do not at any time use compressed air to clean old brake linings.

Tube Type Truck/Bus Tires

The truck tire-restraining device shall be inspected and the posted instructions shall be reviewed prior to performing this work.



1. Multi-Piece Rim Wheels

    a. Tires shall be completely deflated before demounting by removal of the valve core.

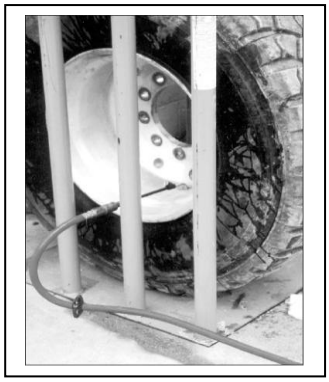
    b. Tires shall be completely deflated by removing the valve core before a rim wheel is removed from the axle in either of the following situations:

        i. When the tire has been driven under inflated at 80% or less of its recommended pressure; or,

        ii. When there is obvious or suspected damage to the tire or wheel components.

    c. Rubber lubricant shall be applied to bead and rim mating surfaces during assembly of the wheel and inflation of the tire unless the tire or wheel manufacturer recommends against it.

    d. If a tire on a vehicle is under inflated but has more than 80% of the recommended pressure, the tire may be inflated while the rim wheel is on the vehicle provided remote control inflation equipment is used and no employees remain in the trajectory during inflation.



    e. Tires shall be inflated outside a restraining device only to a pressure sufficient to force the tire bead onto the rim ledge and create an airtight seal with the tire and bead.

f. Whenever a rim wheel is in a restraining device, the employee shall not rest or lean any part of his body or equipment on or against the restraining device.

g. After tire inflation, the tire and wheel components shall be inspected while still within the restraining device to make sure they are properly seated and locked. If further adjustment to the tire or wheel components is necessary, the tire shall be deflated by removal of the valve core before the adjustment is made.

h. No attempt shall be made to correct the seating of side and lock rings by hammering, striking or forcing the components while the tire is pressurized.

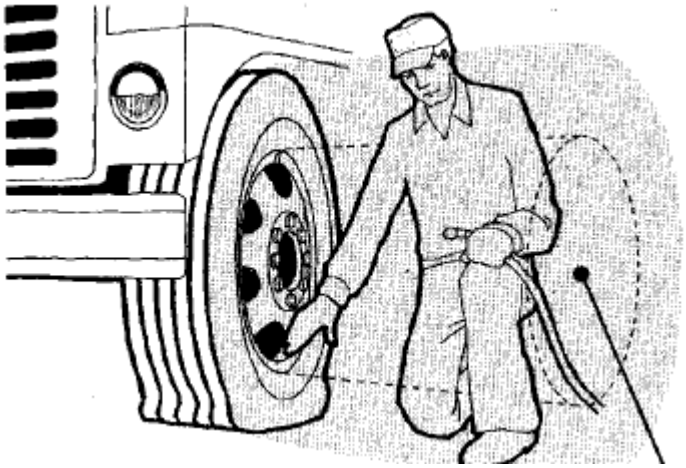
i. Cracked, broken, bent or otherwise damaged rim components shall not be reworked, welded, brazed or otherwise heated.

j. Whenever multi-piece rim wheels are being handled, employees shall stay out of the trajectory.

k. No heat shall be applied to a multi-piece wheel or wheel component.

2. Single Piece Rim Wheels

a. Tires shall be completely deflated by removal of the valve core before



demounting.

b. Mounting and demounting of the tire shall be done only from the narrow ledge side of the wheel. Care shall be taken to avoid damaging the tire beads while mounting tires on wheels. Tires shall be mounted only on compatible wheels of matching bead diameter and width.

c. Nonflammable rubber lubricant shall be applied to bead and wheel mating surfaces before assembly of the rim wheel, unless the tire or wheel manufacturer recommends against the use of any rubber lubricant.

d. If a tire-changing machine is used, the tire shall be inflated only to the minimum pressure necessary to force the tire bead onto the rim ledge while on the tire changing machine.

e. If a bead expander is used, it shall be removed before the valve core is installed and as soon as the rim wheel becomes airtight (the tire bead slips onto the bead seat).

f. Tires may be inflated only when contained within a restraining device, positioned behind a barrier, or bolted on the vehicle with the lug nuts fully tightened.

g. Tires shall not be inflated when any flat, solid surface is in the trajectory and within one foot of the sidewall.

h. Employees shall stay out of the trajectory when inflating a tire.

i. Tires shall not be inflated to more than the inflation pressure stamped in the sidewall of the tire unless a higher pressure is recommended by the manufacturer.

j. Tires shall not be inflated above the maximum pressure recommended by the manufacturer to seat the tire bead firmly against the rim flange.

k. No heat shall be applied to a single piece wheel.

l. Cracked, broken, bent or otherwise damaged wheels shall not be reworked, welded, brazed or otherwise heated.

Used Oil Filters

Used oil filters must be drained for 24 hours before they can be discarded in the trash.