



SAFETY TRAINING MODULES

PROTECT YOUR BUSINESS



Trust in Tomorrow.®

Disclaimer

This booklet has been developed by Grinnell Mutual Reinsurance Company and is for informational purposes only. It was designed to provide reasonably accurate information in regard to the subject matters covered. The information contained herein has been obtained from sources that we believe to be competent and reliable.

Grinnell Mutual Reinsurance Company is aware that this booklet will not fit the operations of all companies. Applicable state/federal statutes must supersede any conflicting statements made or referred to in this booklet.

Grinnell Mutual Reinsurance Company cannot be held responsible or liable for any damages, direct or indirect, which may arise, in part or in whole, from the use of this booklet or from any representation or misrepresentation contained therein. Also, it cannot be assumed that all acceptable safety and health measures are listed in this booklet.

TABLE OF CONTENTS

Avoiding Falls.....	1
Back Injuries	3
Blood Borne Pathogens.....	5
Compressed Gas Cylinders.....	9
Defensive Driving.....	11
Electrical Shock	13
Elevated Work Surfaces	15
Everyone Has a Stake in Fire Safety.....	17
Fire Extinguishers	19
Fire Prevention.....	21
Flammable Liquids.....	23
Forklift Training	25
Foul Weather Driving	27
Fundamentals of Housekeeping.....	29
Good Housekeeping	31
Hand Tools.....	33
Handle Materials Safety.....	35
Hazard Communication	37
Jobsite Fire Prevention	41
Keep Alert – Prevent Falls	43
Ladders are Safe Tools	45
Lift Properly & Avoid Back Injuries.....	47
Machine Safeguarding.....	49
Manual Lifting Safety	53
Motor Vehicle Operation	57
Personal Fall Protection.....	61
Prevent Fall Accidents	63
Prevent Sprains & Strains.....	65
Preventing Slips, Trips & Falls.....	67
Proper Housekeeping	69
Safeguards for Electrical Usage	71
Safety Rules: Driving Commercial Trucks	73
Safety Rules: Truck Operators & Drivers	75
Scaffolding	81

Short Topics for Job Box Talks: 83

- A. Housekeeping..... 83
- B. Passageways 83
- C. Lifting & Handling Materials..... 83
- D. Machinery Operation 83
- E. Ladders..... 83
- F. Electrical 83
- G. Lift Trucks 83
- H. Fire Prevention 84
- I. Injuries 84

Slips, Trips and Falls 85

You Can Lift Safely..... 89

AVOIDING FALLS

Many serious and fatal injuries are caused by falls.

Everyone working on construction jobs must be alert to the hazards that can cause falls. If hazards are discovered, they should be reported to the supervisor and immediate action should be taken to eliminate them.

The following are the hazards that cause the majority of falls in the construction industry. Let's look at the ways to prevent or eliminate these hazards.

Slippery areas, debris, lumber, and various hard materials and equipment scattered over the floor and construction site can cause serious falls. Proper housekeeping can eliminate these hazards and reduce falls caused by slipping, tripping and stumbling. Slippery floors caused by oil or grease spills or ice should be cleaned up immediately. Tools should be stored in a box or rack when not in use. Scrap and debris should be placed in a scrap container.

Stairways and stairwells can also be serious hazards. Temporary handrails and barricade rails should always be placed on stairs and stairwells. Failure to use the handrail can result in a serious fall from the top to the bottom of the stairway. When going down stairs, keep your hand on the handrail so you can grasp it quickly to prevent a fall.

Worn or broken treads on stairs are also slipping hazards. Replace any defective treads. Never place or store materials or tools on stairways.

Floor openings and pits should always be barricaded or covered with planking that is securely fastened in place.

Ladder rails and rungs must always be of the proper design, material and size. Ladders should never be used if the rails are cracked or the rungs are missing or broken. Ladders leading to landings or walkways should extend at least 36 inches above the landing and should be securely fastened. Long ladders must be braced at intermediate points.

Improper placement of the ladder can result in a sudden shift, which could cause a fall. The proper slope of a ladder is essential for maximum safety. Ladders should always be placed properly. The base of the ladder should be set at a distance of one-fourth the height of the ladder away from the wall or structure. Always make sure the ladder is solidly set before climbing it. If necessary, lash it in place to avoid shifting.

Always use two hands when climbing a ladder. Carrying objects in one hand can cause a sudden fall. Place both hands on the side rails, or rungs, whichever is surest for you. Keep a tool line in your pocket for raising or lowering tools or small objects.

Ascending or descending a ladder backward is a sure way to head for trouble. Always face the ladder when climbing, descending or working on it.

Steel scaffolding should be erected and used in accordance with the manufacturer's recommendations. Proper seating and locking of all connections and using the correct devices are extremely important. All scaffolding must conform to the safety code design and be in strict compliance with material specifications and bracing. Where required, steel or wood scaffolds that are more 10 feet high shall have toe boards, and guardrails.

Many serious falls can occur while hurrying. Walk, don't run.

Management can do everything possible to provide safe working conditions. But we need your help. Report any unsafe condition you discover immediately and follow the helpful suggestions we have discussed.

NOTE TO DISCUSSION LEADER:

If falls have occurred recently in your area, be prepared to discuss the accidents with your employees. Listen to their ideas; they may have the answer you have been looking for. Also, mention any hazards that may be peculiar to your particular operation.

NOTE

Use this space to list specific points or problems you wish to discuss during the safety meeting.

DISCUSSION LEADER _____ DATE _____

THE UNDERSIGNED CERTIFY THAT THEY HAVE ATTENDED THIS SAFETY MEETING AND UNDERSTAND THE HAZARDS AND INSTRUCTIONS IT COVERED.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

BACK INJURIES

Whether you're suffering from a pulled muscle, sprain, charley horse or backache, chances are you could have prevented it. More than 250,000 workers injure their muscles by using improper materials handling methods each year. It happens when climbing in and out of trucks and handling objects.

Your back is one area of the body that can never return to its former delicate structure after an injury, because repairs are rarely 100% effective. Precautions should always be taken to prevent injuries and accidents, especially those that affect your back.

The most common source of muscle ache and pain is poor materials handling methods. One work injury out of four results from incorrect handling procedures or from using the wrong equipment. When you straighten up after bending over, muscles, vertebrae, ligaments and discs in your back bear more than a quarter of a ton of strain. If you use your back muscles at the same time, the weight of the object is multiplied 15 times.

Translated into lost time from work, such aches and pains cost nearly \$70 million a year, most of which is spent on pain killers in a futile attempt to relieve the aching back. Because we bring most muscle aches and pains on ourselves the best medicine is a dose of prevention.

Oil spills, clogged aisles, tools lying on the floor, and the act of climbing in and out of a cab can produce falls, which often result in back injuries.

But since the bulk of back injuries results from poor materials handling techniques, these techniques and suggestions may help prevent such injuries:

1. Face the load and avoid twisting your body.
2. Determine the center of gravity in order to keep the load balanced.
3. Watch out for nails or other protrusions that could cause cuts or other types of injuries.
4. Keep the load close to your body and carry it at knuckle height.
5. Don't jerk the load.
6. Make sure the path you're taking is free of obstructions or slipping hazards.
7. Know your limits and get help with heavy or awkward loads.
8. When you set the load down, watch for pinch points.

These reminders may help you on the job:

1. Gear your activity to your age and physical condition. Physical exertion is an excellent body builder, but it should not be performed in excess. Stop and rest when you feel tired.
2. When entering or leaving a truck cab, use the handgrips and make sure the step-ups are dry and clear.
3. If you have a job that allows little movement, it is important to watch your posture and change your working position as often as you can. Don't become tense – rest the muscles that are constantly in use.

Take time each day to remind yourself of what you are doing. In short, use your head to save your back.

NOTE

Use this space to list specific points or problems you wish to discuss during the safety meeting.

DISCUSSION LEADER _____ DATE _____

THE UNDERSIGNED CERTIFY THAT THEY HAVE ATTENDED THIS SAFETY MEETING AND UNDERSTAND THE HAZARDS AND INSTRUCTIONS IT COVERED.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

BLOOD BORNE PATHOGENS

by Andre Pawuk

NOTE TO DISCUSSION LEADER:

When an employee such as a health care worker is exposed to body fluid, he or she may be at risk for infection. This could occur during a regular work assignment or when a fellow employee is injured at the jobsite. Employees need to be aware of the necessary precautions to prevent exposure to blood borne pathogens that can have life-threatening consequences.

Occasionally, a person may be injured while working with equipment in the workplace. After the injured employee is treated, the condition of the used equipment must be evaluated before returning it for future use. Caution needs to be taken to prevent contamination from accidental exposure to the injured employee's body fluid that might be on the equipment.

Employees need to be aware of the dangers of body fluids in today's society – how body fluids can infect them if the employee is in contact with body fluids and what precautions should be taken to protect them. The OSHA blood borne pathogen standard (OSHA 1910.1030) establishes minimum requirements for preventing infectious exposure to employees. Review your company's blood borne pathogen policy.

Suggested materials to have on hand:

1. Company policy including a clean-up protocol
2. Protective gloves and booties
3. Protective eyewear including a facemask and face shield
4. First-aid kit with a protective mouth-to-mouth breathing tube
5. Biohazard us spill clean-up kit
6. Biohazard symbol

Question:

Which two blood borne pathogens are present in the population today that are of greatest concern?

Answer:

1. Human immunodeficiency virus (HIV)
2. Hepatitis B

Question:

How do these illnesses affect a person?

Answer:

1. HIV will causes AIDS. This will affect a person's immune system, making them unable to fight diseases.
2. Hepatitis B affects a person's liver. When a person is infected with Hepatitis B, the individual has a greater chance of acquiring other liver diseases.

Question:

How can a person be exposed to blood and body fluids of other employees in the workplace?

Answer:

1. Being stuck by an infected needle or other sharp instrument, tool or equipment
2. Having direct contact between broken or chapped skin and infected body fluids
3. Administering voluntary first aid

Question:

What measures should be used to protect an employee from exposure to blood and body fluids?

Answer:

Universal precautions

Question:

What are universal precautions?

Answer:

Procedures that require treating all human blood and certain body fluids as if they are infected with blood borne pathogens. Common precautions include wearing latex gloves, protective eyewear and several other barriers previously listed.

Question:

What happens when you must clean equipment to return it to working order?

Answer:

Universal precautions are still needed by employees to ensure they are protected from any body fluid contamination possibly remaining on equipment.

Question:

How can someone “safely” clean potentially contaminated equipment?

Answer:

1. Supplies should be available at work sites and include primary protective barriers, such as gloves, for employees to wear to clean contaminated equipment.
2. Absorbent materials, such as towels or products that encapsulate liquids, may also be used to clean soiled equipment.

Question:

How does an employee avoid contact with contaminated equipment during cleanup?

Answer:

1. Avoiding direct contact with all body fluids while cleaning contaminated equipment is essential; wear barrier gloves
2. Use scoops or tools to pick up any contaminated material.
3. Dispose of all contaminated items in a specific container for biohazardous items.
4. Follow instructions on spill cleanup kit for disposal of contaminated equipment. (Small amounts of contaminated material may sometimes be disposed of in the normal waste stream. Large amounts of biohazardous waste require specific disposal methods.

Question:

How can a person determine whether equipment has been cleaned and readied for use?

Answer:

1. Use standard cleaning protocol as a guide.
2. A visual inspection should be done before returning equipment to use. All gross residue of body fluid should be removed from surfaces.
3. Complete clean-up process with appropriate sanitizing agents.

Question:

What may be used to sanitize equipment?

Answer:

A “fresh” mixture of one-cup bleach in 1/2 gallon of water is acceptable. Wipe affected area in order to eliminate any residual contaminants that may be present.

Question:

When can the equipment be used again?

Answer:

1. Allow cleaned machinery to air dry. This will stop any blood or body fluids from becoming airborne, either as droplets or as an aerosol when equipment is reused.
2. Double check to ensure all body fluids have been eliminated from equipment.
3. Be certain after any cleanup procedure is completed that all items not disposed of are thoroughly cleaned. The person performing the task should also wash thoroughly. Good hand-washing protocol is essential.

COMPRESSED GAS CYLINDERS

Compressed gas cylinders can be found on almost any jobsite. Without them, some operations would be much more difficult; some operations would be impossible. Because they are very common, it's easy to forget how dangerous they can be. Let's review some safety rules for using, storing and working with cylinders.

1. **Never** place cylinders where they could come in contact with an electrical circuit.
2. **Never** place cylinders in locations of extreme heat or near an open flame.
3. **Never** use cylinders as rollers.
4. **Never** store cylinders near the edge of a dock or platform where they could be bumped off.
5. **Never** use valve protection caps to lift compressed gas cylinders.
6. **Never** allow compressed gas cylinders to drop, be struck or violently bang against each other.
7. **Never** take compressed gas cylinders into vessels or confined spaces.
8. **Never** move uncapped cylinders.
9. **Never** permit oil, grease, or other lubricants to contaminate cylinders, valves, regulators, hoses or fittings.
10. **Never** use any compressed gas for cleaning anything, especially skin or clothing.
11. **Never** attempt to mix gases in a cylinder.
12. **Whenever possible** use a cylinder hand truck or cart to move cylinders safely.
13. **Always** ensure that there is adequate ventilation in cylinder storage areas.
14. **Always** keep valves closed when cylinders are not in use.
15. **Always** treat empty cylinders as if they are full – even “empty” cylinders can contain residual product.

Cylinders containing flammable gases or oxygen require special care. Smoking is strictly prohibited where flammable gases are used or stored. Oxygen cylinders must be separated from all combustibles, including cylinders containing combustible gases, by at least 20 feet or by a 5-foot-high barrier with a 1-hour rating.

With some common sense and a little attention, it's easy to avoid cylinder accidents!

SAFETY REMINDER: If you find that a cylinder is damaged or defective, tag it and notify your supervisor immediately.

DEFENSIVE DRIVING

When you're at the controls of any vehicle, it is important to remember that defensive driving is a full-time job. The most dangerous mile you have to drive is the one directly ahead of you. Anyone can drive perfectly for 10 feet or 100 feet or even one mile, but it takes a real professional to drive perfectly for 100,000 miles or more. To be a professional driver there are many things you must observe and practice.

A safe driver is not merely someone who has been lucky enough to avoid accidents, but is one who drives defensively and looks out for others. But today's driving standards demand more skill, knowledge and decision-making ability.

Drivers who are safety-conscious have developed good habits and practice them daily. Every time they get behind the wheel, their driving record is on the line. They must drive like a professional and be prepared mentally and physically.

If you are a driver who has a safe attitude about your driving, you will be able to drive with a sense of security in inclement weather, on difficult roads and through heavy traffic.

In addition, to be a good driver you should respect all traffic laws and be courteous to others. Don't be in a big hurry – you're just asking for trouble. When bad weather affects driving conditions, you must adjust your driving time and habits. Driving on wet or slippery roads is not the same as driving on dry surfaces. The number of traffic accidents and cars running off the road during rainy weather could be reduced if drivers would anticipate the slippery road conditions and adjust their driving habits.

Stay a safe distance from the vehicle in front of you – one vehicle length for each 10 mph. Start stopping sooner. Apply your brakes the instant you see a hazard developing, but apply them gradually so you don't go into a spin or grind to a stop so quickly that you risk a rear-end collision.

Defensive driving is driving to prevent accidents, in spite of the incorrect actions of others or adverse weather conditions. **ANTICIPATE** driving hazards and know how to protect yourself from them. Be alert while driving by keeping your mind free of distractions and your attention focused on driving; alertness involves watching and recognizing accident-causing factors instantly. The professional driver has foresight, the ability to size up traffic situations as far ahead as possible. The driver must **ANTICIPATE** traffic problems that are likely to develop and decide whether these developments could be dangerous.

Many drivers fail to understand why they were given a "preventable" for an accident when they were not legally at fault. A "preventable accident" is one in which you fail to do everything you reasonably could have done to prevent it. Even though the driver cited with a "preventable accident" did not violate any traffic laws, the professional driver should have seen or anticipated the incorrect actions of the other driver in time to take actions to prevent the accident from happening. However, you may also see the valuable lessons that near misses offer and make the necessary adjustments in your driving habits.

As a defensive driver you must operate your vehicle in a manner to avoid contributing to an accident or being involved in a preventable accident.

Awareness of the vehicle's limitations is essential; pre-trip checklists and inspections can familiarize you with the vehicle and point out things that might need attention.

ELECTRICAL SHOCK

Electrical shock kills and injures thousands of workers each year. Most of these accidents happen because people don't look, don't think or just don't understand the shocking power of electricity.

Voltage, current and resistance are the basic terms used when talking about electricity. Voltage is the force that causes the current to flow. Current (amperage) refers to the amount of electricity that is flowing. Resistance denotes the restrictions that try to slow down or stop the flow.

Electrical shock can only occur when a part of the body completes a circuit between a conductor and another conductor or a grounding source.

Death or injury is not caused by the voltage; the damage is done by the amount of current that flows through the body when the contact is made. Of course, the higher the voltage, the greater the amount of current. Some people have survived shocks of several thousand volts, while others have been killed by voltages as low as 12.

The dry outer skin of the human body offers extremely high resistance to electrical flow. However, this resistance is reduced to almost zero when the skin is wet, especially if the skin is wet because of perspiration.

Electricity and proper grounding work together for safety. A ground is a conducting connection between an electrical circuit or equipment and the earth, or to some conducting body that serves in place of the earth.

If your body is sweaty or damp, an oversensitive ground within it is created, which easily causes electrical shock. One way to keep the body's resistance high is to keep it dry, particularly the hands and feet, which might make the contacts and be instrumental in completing the circuit. This can be accomplished by wearing rubber gloves, boots and rubbers.

Effects of electrical shock depend mainly on the total amount of current flow and the path of the current through the victim's body. To prevent electrical shock, which can cause several types of injuries, make sure that your body cannot become part of the electrical flow and the path of the current.

An important phase of electrical safety is knowing how to help an electrical shock victim. First, stop the current flowing from the circuit through the victim's body, if it hasn't already been done. Often, particularly in cases of low-voltage shock, victims are unable to pull away from the source of current. If the victim is still in contact with the current, disconnect or de-energize the circuit, if possible. If this cannot be accomplished, obtain a nonconductive item, such as dry clothing, dry rope or a dry stick, and remove the victim from the source of the current.

Then call or send for help. Next, check to see if the victim's heart or breathing has stopped. Give the required first aid until professional help arrives.

We can reduce the risk of accidents in our workplace by keeping in mind these guidelines:

1. Never use water to put out an electrical fire; water can cause a fatal shock. Use a Class C-rated fire extinguisher for electrical fires; shut off the source of power as quickly as possible.
2. Inspect the area you're working in for electrical hazards.
3. Don't overload circuits.
4. Keep electrical equipment away from water and dampness.
5. Check electrical cords before, during and after each use for fraying and other signs of wear and defects.
6. Be sure to tag out and lock out switches when working on equipment.

Remember: Electricity can be an ally or an enemy. Treat it with respect and it will provide the service you expect.

ELEVATED WORK SURFACES

NOTE TO DISCUSSION LEADER:

For this safety discussion to be effective, before you begin, find out what types of man-lifts and platform lifts your company uses. The purpose of this safety topic is to familiarize the group with the safe use of your man-lifts and platform lifts.

Question:

Does anyone in the group know which brands of lifts our company uses?

Answer:

JLG, Genie, Sky Reach, Grove.

Question:

Why is it most important to be qualified or trained to operate this piece of equipment?

Answer:

1. Each of these pieces of equipment has different controls.
2. Each has its own set of actions or reactions.
3. Safety standards require it.

Question:

What does our company's certification program consist of?

Answer:

Factory-supervised, trained or in-house use of a Train-the-Trainer Program.

NOTE TO DISCUSSION LEADER:

Introduce the written company program to the discussion. If your company doesn't have a program for the safe uses of this equipment, your discussion group can help develop one. The company that leases or sells these units to your facility can help. A hands-on approach using actual equipment is effective.

Question:

List some safe steps to ensure the safe care and use of this equipment.

Answer:

1. Walk around the piece of equipment and evaluate it. Then start by checking the oil and fuel supply. Turn on the fuel supply if it is LPG. Otherwise check battery source, or if electric, check energy source.
2. Check out the ground panel. Set to ground control, turn on key and start unit. Make sure all ground controls work.
3. Shift to basket or platform control. Move to basket or platform.
4. Climb aboard and test all controls.

NOTE TO DISCUSSION LEADER:

Stop and discuss required fall protection and attachment points. For instance, a full body harness is recommended. Note fail-safe of most units with a "dead man's" foot pedal/hydraulics. Review safety features.

We must all be aware of the uniqueness and maneuverability of these pieces of equipment. It's always a good policy to use a ground guide person to get the equipment to its "use" location. Don't travel in an extended or raised platform position.

Question:

What are some factors in location assessment?

Answer:

1. Firm, level footing
2. Clear overhead areas
3. Maintaining appropriate clearance from power lines and sources, overhead sprinklers and cables
4. De-energize these if you must operate within an area where there could be possible contact.

EVERYONE HAS A STAKE IN FIRE SAFETY

Fire kills about 11,700 people yearly in the United States, and nearly 30% of these victims are children. Among the 6,500 fires that occur EACH DAY, our nation's average daily fire toll includes the destruction of more than 1,500 homes; 128 hotels, motels and apartments; 195 stores, offices and restaurants; and 240 other business establishments. **HELP TO STAY FIRESAFE** by following these simple procedures:

KNOW

1. Special safeguards for your own work area
2. The locations of extinguishers, hoses, alarm, phone, etc.
3. Which extinguishing agents to use and how to use them
4. How to sound fire alarm and obtain fire-fighting assistance
5. Where fire exits are located
6. Where the designated meeting place is located

MAINTAIN

1. All areas clean and orderly
2. Unobstructed aisles, exits, and fire protection equipment
3. Flammable liquids, oily waste, and paint soaked rags in approved safety cans
4. Continuing effective removal of all trash accumulations
5. An alert watch to eliminate all heat – fuel – air combinations

REPORT

1. Overheating of materials and equipment
2. Defective electrical equipment, or wiring in poor condition
3. Leaking gas, solvents, oil, gasoline, etc.
4. ALL FIRE HAZARDS WHICH YOU CANNOT CORRECT
5. ALL SPARKING, ARCING and FIRE IMMEDIATELY

FIRE EXTINGUISHERS

Each year we observe National Fire Prevention Week as a reminder to all of us that we need to practice fire prevention and fire safety. If prevention fails and a fire starts, we need to know how to put it out. So let's take a few minutes to learn about fire extinguishers and how to use them effectively.

Do you know where the fire extinguisher is in your work area? If not, find out today! During construction an extinguisher rated not less than 2A is required every 3000 square feet, however, the travel distance to reach this extinguisher must never be more than 100 feet. In multi-story buildings, at least one such extinguisher on each floor must be located adjacent to stairways. Take a moment to look around your workplace to find the location of the nearest fire extinguisher.

There are three common categories of fires:

Class A – ordinary combustibles, like paper, wood, and trash

Class B – flammable liquids, greases, or gases

Class C – energized electrical equipment

Extinguishers are built to extinguish one or more of these classes of fires.

Never attempt to fight even a small fire until the fire department has been called and everyone has been evacuated. Do not fight the fire if you are unsure about the type of extinguisher, unsure how to use it, or if the fire is spreading or blocking your escape. If you can no longer safely fight the fire, leave the area immediately!

When using an extinguisher think of the acronym PASS – P.A.S.S. The “P” stands for Pull the pin, the “A” stands for Aim the extinguisher nozzle at the base of the flames, the “S” stands for Squeeze the trigger while holding the extinguisher upright, and the second “S” stands for Sweep from side to side, covering the base of the fire with the extinguishing agent. Let's review this one more time. Remember to PASS: Pull, Aim, Squeeze, and Sweep!

Even though we try to prevent fires, occasionally one may start and we must be prepared. If noticed quickly, and a fire extinguisher is available, the fire can be extinguished and property damage can be minimized. Make sure fire extinguishers are inspected frequently! For more information on extinguishers see 29 CFR 1926.150(c)(1).

FIRE PREVENTION

A fire caused by poor housekeeping, carelessness or failure to follow instructions can destroy your job, your income, and even your life. But the chance of a fire can be reduced if everyone makes an effort to practice daily fire prevention measures.

Follow these fire safety tips:

1. Don't allow trash and litter to accumulate unnecessarily.
2. Keep the office and dock areas neat and clean.
3. Know where fire alarm boxes and extinguishers are located.
4. Make sure you know the different types of fire extinguishers and how to use them; check periodically to see if they are charged and well marked.
5. Store hazardous materials in designated areas.
6. Keep exits free of obstructions.
7. Make sure there are good connections and effective grounds in the wiring.
8. Smoke only where permitted.
9. Keep equipment clean and use it properly.
10. Handle flammable liquids with caution.
11. Know the proper exits and procedures in case of an emergency.

If you store hazardous materials properly, the chances of fire, spills and accidents are greatly reduced. A leaking drum of lacquer thinner can be a fire hazard unless the right precautions are taken. Make sure you know the loading and storage chart so that you don't load noncompatibles on the same trailer or in the same area of the terminal.

Every terminal should have an emergency plan. In case of fire or other emergencies, procedures should outline who is to call the fire department and how the building is to be evacuated.

When a fire or emergency evacuation does occur, don't panic. Keep calm and follow instructions. Know the right fire extinguisher for each type of fire.

Following rules is not just the responsibility of the safety supervisor or the terminal manager – it's everyone's responsibility.

It is also important to be aware of arsonists. Keep an eye out for unusually placed flammables, such as oily rags stored in peculiar places. If you watch for "offbeat" actions you may be able to spot the arsonist. Don't take the necessary steps yourself. Tell your supervisor at once.

Fire prevention is everyone's job.

FLAMMABLE LIQUIDS

NOTE TO DISCUSSION LEADER:

Refer to those flammable liquids that are used in your workplace and ask employees to relate their experiences with those liquids.

Liquids are rated as flammable or combustible based upon the temperature required for the liquid to give off enough vapor to form an ignitable mixture with the air. Flammable liquids form such a vapor at temperatures below 100 degrees Fahrenheit and combustible liquids at temperatures between 100 degrees and 200 degrees Fahrenheit. Gasoline will form a flammable mixture in temperatures as low as -50 degrees Fahrenheit, while some heavy fuel oils must be heated or sprayed before they vaporize enough to form the mixture.

Large amounts of these liquids should be stored in a special flammable storage room or cabinet. The amount of flammable liquid kept on hand near any industrial operation should be limited to a supply for one day or one shift. Flammable liquid containers must be clearly identifiable. (A red diamond shape with black lettering is used to designate flammables.) Store flammables in a self-closing safety can with a spark arrestor in the pouring spout. Do not leave flammable liquids in open containers because the liquid can vaporize and cause an ignitable mixture to build up.

When rags or other materials are used with flammables, store the liquid-soaked rags in a metal container with a close-fitting lid. This keeps excess oxygen away from the rags and reduces the possibility of a fire. When exposed to the air, some rags can produce enough heat to cause them to ignite spontaneously.

All ignition sources must be controlled around flammable liquids. The "no smoking" rule must be enforced and non-sparking tools may be required. Special explosion-proof electrical equipment may be required; never use standard electric power tools around flammable liquids.

All bulk containers must be grounded and bonded during dispensing operations. This means that there must be a conductive connection between the receiving container, dispensing container and a specially installed ground, like a water pipe.

Some materials can be ignited by the minimal energy in a static spark; therefore, when drawing liquids from a bulk tank to a portable use container, the container should be bonded to the tank. This means that there should be a solid connection between the tank or barrel and the container. Self-closing valves must be used with the dispensing containers to limit spills.

Special care must be taken to clean up any spilled material and it must be properly disposed of in accordance with local, state and federal regulations.

NOTE TO DISCUSSION LEADER:

Review the storage and handling procedures for flammable liquids in your ~ workplace. Discuss the different types of storage containers and labeling practices. This would also be a good time to review your fire emergency plan. Make sure employees know what to do in case of an emergency. If appropriate, you may want to discuss the proper handling of hazardous wastes.

FORKLIFT TRAINING

New rules regulating the operation of powered industrial trucks went into effect on March 1, 1999. These regulations require operators to be trained and evaluated before being allowed to operate a powered industrial truck.

A powered industrial truck is defined as a mobile, power-driven vehicle used to carry, push, pull, lift, or stack material. Vehicles that we commonly refer to as forklifts, high-lift trucks, cantilever trucks, motorized hand trucks, pallet trucks, reach-rider trucks, and order-picker trucks are considered powered industrial trucks. This standard does not cover vehicles used for earth moving or over-the-road haulage.

According to the new regulations, operators must be trained and certified. The training consists of a combination of formal instruction, practical training, and evaluation of the operator's performance in the workplace. An operator cannot be certified without completing the training and successfully passing a test. The training program must cover four areas:

1. The general hazards that apply to the operation of powered industrial trucks
2. The hazards associated with the operation of the particular types of trucks to be used
3. The hazards of workplaces in general
4. The hazards of the particular workplace where the trucks will operate

Passing the test doesn't automatically mean that you are a safe operator. Every time you use a powered industrial truck, you must consider many potential hazards. Start with the truck itself – is it in safe operating condition? Make sure the loads you move are secure and within the truck's capacity. Visibility can be a problem, so watch out for others and move with caution. Pay close attention to uneven, soft, or unstable ground, which could cause the truck to tip over or become stuck. Never allow riders on the forks, the load, or anywhere else on the truck that is not specifically designed to carry passengers.

Forklift safety is a team effort. Management must allow only certified operators to use powered industrial trucks. They must enforce the rules. Operators must follow all of the rules and procedures and operate powered industrial trucks safely. All the rest of us must be aware of the dangers of powered industrial trucks, follow the safety rules, and stay out of the way. For more information on forklift safety and training see 29 CFR 1926.600, .602(c,d), and 1910.178(1).

Whether you are using your back or a forklift, SAFETY REMINDER you must evaluate your load, route, and destination before you begin a lift.

FOUL WEATHER DRIVING

Bad weather affects all roads. Our interstate system is a marvelous example of modern engineering, but no matter how good the road is, it is dangerous when there is sleet, snow or ice on the roadway. Speed must be reduced on slippery roads.

When road conditions are slippery, drivers must look farther ahead so they can anticipate emergencies and avoid the need for sudden maneuvers. Most skids are caused by last-second stops and turns on slippery pavements.

Extra care must be taken on hills. Brake over the top of blind hills at a speed that will permit you to bring your vehicle to a stop in case the highway isn't clear ahead. On a downgrade, both loss of traction and gravity are working against you.

Don't attempt to drive around or through a scene where other vehicles have obviously had trouble with the road conditions. The same conditions that caused their trouble may still be there when you arrive. When there is no room to get through, you must be prepared to stop.

During the winter months, snow- and ice-covered truck lots are prevalent in all parts of the midwest. Good drivers will allow more clearance between their vehicles and other vehicles and fixed objects when maneuvering on bad surfaces. A pile of snow or an ice rut may throw vehicles off just enough to cause them to strike a stationary object, if not enough clearance has been allowed.

Drivers of vehicles with air brakes must take care to protect their air supply in freezing weather. Brake line freeze can be annoying and dangerous. Many newer trucks are equipped with synthetic airlines, so the old solution of melting the ice with a fuse or torch is no longer a quick solution. If the vehicle is not equipped with an air dryer or other means of automatically expelling water and other contaminants from the air tanks, the driver must take the time to manually drain the air tanks every day.

The lighting systems of vehicles become especially important during the winter months. Nights are longer and visibility is often reduced by bad weather. Electrical systems are winter-sensitive. Approximately 80 percent of all light bulb failure is due to environmental reasons. Drivers must inspect their lights more often during the winter and clean them when necessary so they can see and be seen by other highway users.

Foul weather driving is much more strenuous. Drivers need proper rest before every trip, and while enroute, fresh air helps keep drivers alert. An open window is an old safety practice, and it helps drivers hear what is going on around their vehicles.

After all precautions are taken and good practices are followed, there still will be occasions when conditions become too hazardous to proceed. Good drivers will pull off the road at the first safe place, notify their companies of the delay and wait until conditions improve before continuing.

FUNDAMENTALS OF HOUSEKEEPING

An uncluttered workplace is fundamental to any plant's safety program. In addition to cleanliness, industrial housekeeping must include other factors, such as orderliness and proper arrangement of materials. It is important to know the benefits of good industrial housekeeping. Let's review the importance and meaning of **order** in achieving good housekeeping, and discuss some guides for checking your own work area.

A. WHY GOOD HOUSEKEEPING?

Sloppy working conditions can lead to a lack of pride in your work. We should not overlook slippery floors, obstacles in aisles, tools on the floor, and platforms that are not in proper condition, or other housekeeping hazards.

In addition to encouraging poor attitudes, bad industrial housekeeping can lead to:

1. Slips from slick or wet floors, platforms, and other walking and working surfaces
2. Trips from objects or materials that are left in walkways and work areas
3. Falls from holes in walking and working surfaces, uneven flooring, uncovered pits or drains, and boxes and pallets that are used instead of adequate platforms
4. Collisions caused by poorly stored materials, overhanging or protruding objects, haphazard spotting of pallets, and use of aisles for storing materials and equipment
5. Poor industrial housekeeping creates hazards for all employees in the immediate area

B. GOOD INDUSTRIAL HOUSEKEEPING

1. Eliminates accident and fire causes
2. Saves energy by eliminating the need to work "around" congested areas and "deadwood" stored in the work area
3. Provides the best use of space
4. Keeps inventory of materials to a minimum
5. Helps control property damage
6. Guarantees a good workplace appearance
7. Encourages better working habits
8. Reflects an image of a well-run operation
9. Reduces the amount of cleanup and janitorial work

C. ORDER

Housekeeping is more than just sweeping the floor and wiping dust off machines and equipment. Cleanliness is only a part of housekeeping. The most critical and most overlooked part of housekeeping is ORDER. A work area is in order when there are no unnecessary objects in the area and when all necessary items are in their proper places.

NO in this definition means **NONE –NOT ANY – NOT EVEN ONE!**

A workplace is not considered to be in order simply because "there is a place for everything and everything is in its place."

Do you use your production area for storage? Do you keep supplies in the area because "they'll be needed one of these days?" If there is one item in an area that is unnecessary, or not in its proper place, then you do not have order.

Order is maintained, not achieved. You cannot put an area in order and then forget about it. A daily conscious effort by everyone working in the area is necessary to maintain order. Order also must be obtained throughout the day. If you wait until the end of the day and then place everything in order, what good did it do you during the day? Disorder wastes time, energy and materials.

D. ESTABLISHING A HOUSEKEEPING PROGRAM

A good housekeeping program must include careful planning, a clean-up schedule or policy, effective inspection, and continuous supervision and enforcement of housekeeping rules.

Inspect your area for unnecessary tools, equipment, parts, materials and supplies; items that are not needed should be sent to the storage room or used for salvage.

Reorganize the storage area in your workplace. Establish one or more storage areas for holding finished products and daily quantities of raw materials and supplies; storage areas should not obstruct aisles and work areas.

Create a daily clean-up policy and program. Periodically review the housekeeping rules, clean-up policies and procedures.

E. HOUSEKEEPING RULES

1. Walking and working surfaces should be clean, dry and unobstructed.
2. Aisle ways and exits should be clearly marked and unobstructed.
3. Approved trash receptacles should be provided to assure proper waste disposal.
4. Splashguards and oil pans should be available for machinery as needed.
5. Work area floors should be kept free of pallets, parts, equipment, extension cords and hoses.
6. Floors, platforms and stairways should be kept in good repair.
7. Adequate platforms should be provided; never use additional platforms or boxes and pallets as substitutes.
8. Walls and ceilings should be free of hangings and temporary wiring.
9. Materials should be stacked in a stable manner; limit height as necessary to maintain stability.
10. Overhanging or protruding storage should be eliminated.
11. Storage areas in and around buildings should be free of refuse and debris.
12. Stock should be stored in a manner that will not obstruct sprinklers (18-inch clearance for ordinary combustibles, 36-inch clearance for flammable liquids).
13. Combustible materials should never be stored on radiators, steam coils, ovens or other heat sources; in transformer vaults; or around electrical switch gear.
14. Production equipment should be arranged to prevent overcrowding.
15. Storage areas should be placed in a convenient location to encourage their use.
16. Adequate lighting, both natural and artificial, should be provided to assure good visibility for work activities and to reveal dirt, obstructions and poor housekeeping conditions.
17. Leaks from hoses, pipelines and valves should be repaired immediately.
18. Racks, shelves and lockers should be maintained for tools, personal protective equipment and personal items.
19. Lunch facilities, locker rooms and toilet areas should be clean, orderly and sanitary.

Order results in greater and safer production of better products at lower costs. Improved production and costs mean increased business and prosperity for our company and you, its employees.

NOTE

Use this space to list specific points or problems you wish to discuss during the safety meeting.

DISCUSSION LEADER _____ DATE _____

THE UNDERSIGNED CERTIFY THAT THEY HAVE ATTENDED THIS SAFETY MEETING AND UNDERSTAND THE HAZARDS AND INSTRUCTIONS IT COVERED.

GOOD HOUSEKEEPING

The importance of industrial “housekeeping” cannot be over-emphasized. The condition of housekeeping within a department is a reflection of the efficiency and the accident prevention attitude of those who work there. Housekeeping is not limited to keeping the place clean; it is also concerned with keeping tools, equipment and materials in good repair and in their proper place. Good housekeeping is essential to safety and accident prevention.

A. TYPES OF ACCIDENTS THAT CAN BE PREVENTED THROUGH CONSCIENTIOUS HOUSEKEEPING

Here are a few of the more common ones:

1. Tripping over loose objects on floors, stairs and platforms.
2. Slipping on wet, greasy or dirty floors.
3. Bumping against projecting or misplaced material.
4. Puncturing or scratching hands or other body parts on protruding nails, hooks or rods.
5. Injuries from falling objects.
6. Mistaking the contents of an unmarked container of material.

Unfortunately, there aren't any short cuts to good housekeeping. No one likes to work in a dirty, cluttered place, so each one of us have to be responsible for keeping his or her surroundings neat and safe.

A clean workplace is less costly to operate, more productive and safer. In addition, employee morale is known to be higher in plants with good housekeeping programs.

B. CHECKLIST

Which of these items apply to your work area and operation?

1. Are aisles clearly marked and free from stored materials, idle racks, projecting piles of stock, etc.?
2. Are stairs and ramps free from wall obstructions and stored items? Are handrails and stair treads in good repair?
3. Do floors give good traction? Are they free from spilled liquids or other spilled hazards?
4. Has excess material in-process collected around any worktable?
5. Has scrap been allowed to accumulate in work areas?
6. Are hand and power equipment not currently in use put away?
7. Is there good personal housekeeping evident at individual work stations?
8. Are there leakages, either from overhead or elsewhere that are causing hazards?
9. If first aid materials are kept on hand, are they sanitary, fresh and in ample supply?
10. Is any material that has been removed from its original container been identified with an OSHA approved manufacturer's label?

C. IN SUMMARY

It is far easier, safer and more efficient to prevent a mess from developing than to clean it up after it has developed.

D. THOUGHT PROVOKERS

1. What conditions can you think of in our workplace that could cause an accident?
2. Can any of you tell of other injuries, which you know of, that were caused by poor housekeeping?

HAND TOOLS

Many accidents and injuries can be avoided by keeping your tools in good condition and using them correctly. It is a good rule to inspect your tools before and after using them, looking for defects that could cause an injury. Defective tools should be returned to the tool crib so that they can be repaired or replaced.

A. CROWBARS

Use a crowbar for prying, but select the correct size for the job. Do not try to increase the leverage by using a length of pipe or iron bar.

B. FILES

When using a file, have secure footing before applying pressure. Grasp the file with one hand and guide the point of the file with the thumb and forefinger of the other hand.

Use a vise to secure the material being filed, and use an offset handle if it is available. Clean a file with a file card, not by striking it against another piece of metal; steel particles can fly off. Equip the file with an approved handle.

C. HAMMERS

When replacing hammer handles, make sure they fit the hammerhead. Wedge the handle securely in the head and make sure that it is free of splinters and cracks.

Never strike hardened steel surfaces with a steel hammer. Use a soft metal hammer or one with a plastic, wood or rawhide head. Always wear safety glasses to protect your eyes from flying chips, nail heads or scale.

Inspect sledgehammers carefully at regular intervals for split handles and loose or chipped heads. Use riveting hammers for sheet steel, carpenter or claw hammers for driving and pulling nails, and ball-peen hammers for metal work.

D. HOOKS

Keep hand hooks sharp to prevent them from slipping. Shield the point of the hook with a one-inch piece of rubber hose, or carry it in a specially designed sheath. The point of the hook can also be pressed into a small cork to avoid puncture injuries.

E. JACKS

Check the capacity plate to determine the lifting power of the jack, and remove the handle when moving the jack.

Make sure the jack's holding fixture is in good condition – broken teeth are hazardous. Place the jack on a level surface and securely anchor the base with nailed blocks or wedges. The jack can also be secured with ropes.

Remove the jack handle after reaching the desired elevation; otherwise, the handle could be struck, causing the jack to topple from under the load.

Watch for leaks in hydraulic jacks, because oil and grease on the bottom of the jack is particularly hazardous.

Wear safety shoes and keep oil and grease off your hands when working with a jack. Use plenty of blocking to support the load after it has been raised.

F. PLIERS

Apply pressure directly across the line of cut when using pliers. Never substitute pliers for a wrench or a hammer because pliers chew up nuts and bolt heads. In addition, pliers cannot grip nuts or bolts securely.

Electricians should use hand-insulating grips. Make sure the protective coverings are free of cracks, holes or broken pieces.

Hold the coil or length of wire securely in a vise when cutting it with pliers. Hold the open end of the wire with your free hand to prevent the cut-off end from flying.

If a vise is unavailable, kneel on the floor and hold the wire with one foot. Always wear safety glasses when cutting wire.

G. SCRAPERS

Keep scrapers sharp and in good condition and store them in special racks to protect the edges.

H. SCREWDRIVERS

When driving screws into small objects, hold the objects in a vise. When performing electrical work, never use a screwdriver with a shaft that extends all the way through the handle.

Pay particular attention to the tip size when selecting a screwdriver; the tip should fit snugly in the slot of the screw. Do not use a twisted screwdriver tip because it could slip and cause an injury. Never use a screwdriver as a punch, wedge, pinch bar, pry or chisel.

I. WRENCHES

When placing an adjustable wrench on a nut, make sure the adjustable jaw faces you; then pull the wrench toward you. Use socket wrenches for hard-to-reach places.

Never use a pipe wrench on nuts because the corners of the nuts or bolts are likely to break the teeth of the wrench jaws, making it unsafe for future use.

Manufacturers make wrenches of different sizes, so the amount of leverage obtained with the wrench handle is the maximum application; it is unsafe to add more leverage with a length of pipe, for example.

NOTE TO DISCUSSION LEADER:

If other kinds of hand tools are used in your particular operation, you may want to include them in this discussion. The list of tools provided in this talk is by no means complete.

NOTE

Use this space to list specific points or problems you wish to discuss during the safety meeting.

DISCUSSION LEADER _____ DATE _____

THE UNDERSIGNED CERTIFY THAT THEY HAVE ATTENDED THIS SAFETY MEETING AND UNDERSTAND THE HAZARDS AND INSTRUCTIONS IT COVERED.

HANDLE MATERIALS SAFELY

More workers are injured on the job from the manual handling of materials than for any other reason. One out of every four work injuries, and one out of seven fatalities, results from the manual handling of some article or material. The trained, skilled and experienced employee can do much to further his own safety and that of others by adhering to the following simple practices:

1. **STOP, LOOK AND LISTEN** before starting the job. Identify the hazards involved and plan for their elimination or control.
2. Substitute mechanical handling or get someone to help you when materials are too heavy, bulky, or require prolonged or repeated lifting.
3. Wear gloves when handling rough, hot, sharp or toxic materials.
4. Wear safety shoes when handling heavy materials.
5. Clean up, wipe up and pick up. Eliminate fall hazards.
6. Store materials so they do not project in aisles. Protect sharp edges.
7. Wear prescribed protective clothing and use proper containers when handling caustic, acid or corrosive materials.
8. Wear approved respirators when working in harmful or dusty atmospheres.
9. When exposed to eye hazards, wear safety glasses.
10. When LIFTING, stoop and bend your knees. Keep your feet close to the load. Lift with your legs. Keep your back straight.
11. Wash thoroughly and carefully after handling dusty, dirty or skin irritating materials.

NOTE

Use this space to list specific points or problems you wish to discuss during the safety meeting.

DISCUSSION LEADER _____ DATE _____

THE UNDERSIGNED CERTIFY THAT THEY HAVE ATTENDED THIS SAFETY MEETING AND UNDERSTAND THE HAZARDS AND INSTRUCTIONS IT COVERED.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

HAZARD COMMUNICATION

Hazard Communication refers to having a better understanding of the many chemicals we encounter and use in our workplaces. There are approximately 600,000 chemicals available to use in the workplace and many more are being created each year. Through exposures to these chemicals there may be no reaction, only mild reactions or serious reactions – both short and long term.

The objective of the Hazard Communication Standard is to help all employees go beyond simply identifying chemicals they work with. The standard also strives to help them know the characteristics of the chemicals and take appropriate measures to control exposure.

Employees have a “Right to Know” about the chemicals they encounter in their work environment. With this information, employees can make the right decisions on the proper ways to handle and use workplace chemicals. When in doubt, workers should contact their supervisors for help.

Question:

What are the hazards?

Answer:

There are physical hazards that mostly act outside the body, such as flammables or explosives. There are also health hazards that could cause internal problems such as stomach ailments, skin disorders and reproductive concerns.

Exposure to these hazards may be:

1. Acute – occurring in a short time, such as a chemical burn or respiratory distress
2. Chronic – occurring over time, such as carcinogenic or reproductive effects. (Central nervous system reactions may be rapid or occur over a long time.)

Question:

How are we exposed to hazards?

Answer:

Routes of entry into the body consist of:

1. Inhalation – breathing a gas, fume, vapor or dust.
2. Ingestion – eating something contaminated; contact with contaminated items such as food, cigarettes or makeup.
3. Absorption – skin contact with a chemical.
4. Injection – agent is forced into the body through a needle or high-pressure device such as diesel injector, a hydraulic system leak or a high-pressure airless paint system.

Question:

What is the most immediate way to know about the hazards?

Answer:

The required chemical label lists the name of the chemical, physical and health hazards and target organs. Protective clothing, first-aid information, storage and spill information may be listed but are not required.

Question:

How do you find out about Hazard Communication?

Answer:

Company training should explain:

1. The company hazard communication program
2. Where to find the list of chemicals in your area
3. How to read labels
4. Where material safety data sheets (MSDS) are located and how to read and understand them
5. How to detect the presence of chemicals and take appropriate action when they are detected

Question:

What is a Material Safety Data Sheet (MSDS)?

Answer:

MSDS's aren't always easy to understand. They are the suppliers' product information and consist of four general categories:

1. Information about the product
2. Exposure information
3. Methods to reduce or control exposure
4. Other information unique to the particular product

Question:

Where should you focus when looking at an MSDS?

Answer:

1. Ingredients and their exposure limits when ingredients are not a trade secret;
2. Any hazards (regardless of trade secrets—1910.134 (i) (1) (ii));
3. Specific hazards occurring when using the materials;
4. Protective measure to take when using the material;
5. What to do if exposed to the chemical.

NOTE TO DISCUSSION LEADER:

Reiterate that using chemicals safely requires planning by employees. Have examples of MSDS's and labels of chemicals used in your workplace. Remind the group to read labels, look at the MSDS if needed and follow guidelines.

Tell them not to assume that a previous exposure at home or at work has been harmless. Stress taking proper precautions and exercising each person's "Right to Know". Finally, supervisors are there to provide additional guidance when necessary.

RESOURCES:

Hazard Communication – The Road to Safety, Coastal Video Pamphlet, 1995.

Understanding the Hazard Communication Standard, Business and Legal Reports Pamphlet, 1993.

Hazard Communication Training Handbook with "What's Wrong With This Picture" video, Aurora Picture, Inc., 1989.

Basic Safety and Health Manual, Chapter 18. Division of Safety & Hygiene Publication.

OSHA Standard (29 CFR 1910.12(10) 1994.

UNDERSTANDING HAZARD COMMUNICATION QUIZ

1. The Hazard Communication Standard is often referred to as the employees' "Right to Know" law. *T or F*
2. A "flammable substance is an example of a physical hazard. *T or F*
3. Long-term exposure to chemicals is an acute exposure. *T or F*
4. Inhalation is a route of entry into the body for chemicals. *T or F*
5. A chemical's name should be on the product label. *T or F*
6. The Hazard Communication Training Program is a method of telling employees about how to work with chemicals. *T or F*
7. Employees can expect to see exposure information on the MSDS. *T or F*
8. Required protective equipment should be noted on both the label and the MSDS. *T or F*

NOTE

Use this space to list specific points or problems you wish to discuss during the safety meeting.

DISCUSSION LEADER _____ DATE _____

THE UNDERSIGNED CERTIFY THAT THEY HAVE ATTENDED THIS SAFETY MEETING AND UNDERSTAND THE HAZARDS AND INSTRUCTIONS IT COVERED.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

JOBSITE FIRE PREVENTION

Fires are very costly to the construction industry. Each year they take many lives, cause workers and their families to suffer, and cost millions of dollars.

Fire control is everyone's business. You can do your part by observing and complying with fire-control regulations. If you notice any hazards or conditions that could cause a fire, report them to your supervisor immediately.

Matches and cigarettes are principal causes of fire. Many fires have started because of carelessly dropped live ashes, cigarette butts or burning matches. The temperature of the ash is often as high as 1,200 degrees Fahrenheit and if it comes in contact with combustibles, fire can result. Fireproof receptacles should be used to extinguish smoking materials.

Poor housekeeping is one of the major contributing factors that cause fires. Oily rags, paper, sawdust, solvents, paints and cartons should be disposed of properly. Trash should not be allowed to accumulate in the work area.

Oil or gasoline that is spilled on equipment should be cleaned up immediately. Make sure that oil-soaked rags are placed in proper safety containers.

Fires are also caused by the improper use of paints and solvents. Paint, paint thinner, alcohol, naphtha, lacquer thinner and gasoline should be used only for their intended purposes. Flammable liquids of any kind must be kept in approved safety containers.

The improper use of welding equipment can easily destroy property. Fire-resistant covers, spark shields and a firewatcher standing by, plus the proper use of the equipment, are the only answers to prevent damaging fire losses.

Defective wiring has caused many fires. Never try to repair wiring or equipment. Report defective items and have the repairs made by experts.

It's sometimes necessary to have a salamander or other temporary heating devices on the jobsite to warm yourself. Extreme caution should be used when the salamander is burning. Never throw combustibles into it. The fire should never be large enough to throw sparks.

Several fire extinguishers should be on the jobsite. Each of you should know where they are located and how to use them. You should also know where the fire alarm is located and how to turn in an alarm. Never try to extinguish a fire until you have turned in an alarm, and don't try to fight a fire alone.

NOTE TO DISCUSSION LEADER:

Bring the different types of fire extinguishers that are supplied in your work area to the meeting and demonstrate proper usage. Review your company's fire record and discuss it with those attending. Describe where fire extinguishers are located and the evacuation procedures for employees.

Always watch for smoke because **“where there's smoke there's (usually) fire.”**

Do what you can to prevent fires, but always be prepared by knowing what actions to take should one occur. Know where alarms and fire extinguishers are located. Fire control is everyone's business. When you think of fire, think of safety!

NOTE

Use this space to list specific points or problems you wish to discuss during the safety meeting.

DISCUSSION LEADER _____ DATE _____

THE UNDERSIGNED CERTIFY THAT THEY HAVE ATTENDED THIS SAFETY MEETING AND UNDERSTAND THE HAZARDS AND INSTRUCTIONS IT COVERED.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

KEEP ALERT – PREVENT FALLS

Rarely does anything happen as quickly as a fall. During a fall, our reflexes come into play and try to protect us. Often this quick muscular reaction can cause strains or sprains and, in some cases, body tension, which may result in a more serious injury than if the body were relaxed during the fall.

Since we have no control over our reflex actions, it is wise to be aware of objects and conditions that cause falls.

Some of the most common tripping hazards, or falls at the same level, are caused by objects left lying around and low protruding pipes, lumber, drawers and tool handles.

Oil, water and other liquids on walking surfaces are especially dangerous. Spills should be cleaned up immediately or absorbent material spread over the area to reduce the slipping hazard.

Beware of ice and snow on trucks, docks and construction sites and when entering or leaving the plant. Falls from one level to another frequently involve falling off ladders, docks, scaffolds and roofs, through floor openings, or down stairways, which can often result in serious injury or even death.

In order to avoid such hazards, precautionary measures must be taken. Always use an approved ladder and never overextend yourself while working on it. Check it for safety grips or tie the bottom portion. It is important that the bottom of the ladder be placed 1/4 of its vertical height away from the building. For example, if the ladder is 16 feet high, the bottom of the ladder should be 4 feet from the building. The top of the ladder should be 36 inches higher than the level at which you are working.

Keep metal ladders away from live electrical wires. Perimeter guarding should be installed around open areas where ladders are being used. Scaffolds should have guardrails and toe boards.

Stairways are meant for walking, not running. Use handrails, and if there is not enough light, report it. Stairways are to be kept uncluttered with the treads in good shape.

Being alert is one of the surest ways to reduce injuries caused by falls. This includes being aware of our environment, personal safety and the safety of co-workers.

LADDERS ARE SAFE TOOLS . . .

IF properly designed, **IF** properly maintained and **IF** properly used. Nevertheless, each year thousands of persons are seriously injured or killed in ladder accidents on the job or in the home. The critical problem with ladders is that they are so familiar to all of us that we begin to use them without ever learning how to use them safely. Take the minute required to check yourself on the following points, and if you aren't familiar with each of them, take that other extra minute needed to learn them.

1. Always choose the **RIGHT LADDER FOR THE JOB**. It should be long enough, strong enough, and of the right design for the limited work intended. Do not use a metal ladder if you are working around electrical wiring.
2. **CHECK to BE SURE** it is in **GOOD CONDITION**. Don't use ladders with cracked, damaged, or missing parts. If a ladder is weak or wobbly it is unsafe.
3. **ERECT** the ladder **EVENLY** on a **SOLID BASE**. The spreaders of step ladders must be fully open and firmly locked. Place feet of straight ladders 1/4 the ladder length away from the wall to reduce strain on the rails and the danger of slippage.
4. **SECURE** straight ladders at **TOP and BOTTOM** against displacement. **REMEMBER** most accidents occur due to the ladder slipping.
5. **ALWAYS FACE** ladder and **GRASP** side rails with **BOTH HANDS** when ascending and descending. Haul tools up by line.
6. **NEVER ASCEND** a ladder **HIGHER** than the **THIRD STEP** from the **TOP**. This also means you stay off the top two steps and platform of a stepladder.
7. **DO NOT OVER REACH** your ladder. Move ladder to the work. **ALWAYS KEEP ONE HAND IN POSITION TO GRASP THE LADDER**.
8. **NEVER** use a ladder as a horizontal platform or runway.

LIFT PROPERLY AND AVOID BACK INJURIES

How many times have you heard somebody say “Oh, my aching back!”? More to the point, how many times have you said those same words? You can learn how to lift properly either before you get a back injury or **after you get a back injury**. Assuming that the injury is not too serious, you’ll definitely learn after an injury because lifting any other way just hurts too much. The right time to learn is before an injury – if you do, you may save yourself from a lot of agony. Today’s safety meeting is going to discuss how and why to lift properly.

Lifting and carrying require more than just brute force, good technique is important too. When you lift and carry the wrong way, you can injure your back. Back injuries are the most common type of injury in the workplace. They cause approximately 800,000 disabling injuries each year. That means that 91 people are disabled every hour of every day! More than half of all these injuries are the result of improper lifting. Make an effort to take care of your back whether you are lifting something at work or at home. You should know how much weight you can lift without getting hurt. Nobody wants you to hurt yourself by trying to lift more than you should. If you cannot manage the load yourself, ask another person to assist you or use a mechanical lifting device.

Before you lift anything, especially a heavy or bulky object, run through this list:

- Size up the load.
- Keep your back straight and stomach pulled in.
- Check for slivers, rough edges and protruding nails.
- Get a firm, comfortable grip.
- Put rings, watches and jewelry in your pocket.
- Lift with your legs not with your back.
- Check your path for tripping hazards.
- Keep the load close to your body.
- Make sure the destination is ready and clear.
- Avoid twisting or jerky motions.
- Squat down close to the load with your feet apart.

Lifting properly isn’t hard; it’s just a little different than the way most of you are used to lifting. Because it’s different you will have to think and concentrate until the safe way becomes a habit. Remember, a strong, healthy, powerful back is vital to your job, your income and your livelihood – it also makes your life more comfortable and more enjoyable.

SAFETY REMINDER

Don’t leave safety for “the other guy” because as far as everyone else is concerned, you are the other guy!

MACHINE SAFEGUARDING

NOTE TO DISCUSSION LEADER:

Machines and equipment have been on the job for many years. Even with all the refinements and innovations in machine safeguarding, employees still are having more than their share of injuries due to improper or incomplete machine safeguarding. Not only is it important to have properly designed and installed machine safeguarding, but it must be in place on the machine to be effective. This safety discussion focuses on why machine safeguarding is necessary and ways to effectively safeguard machines.

The Need for Machine Safeguarding

Question:

How could an operator make direct contact with dangerous parts of a machine?

Answer:

1. Inattention
2. Distraction
3. Curiosity
4. Risk taking
5. Horseplay

Question:

Why would an operator make direct contact with a machine?

Answer:

1. Fatigue
2. Worry
3. Anger
4. Illness.

Question:

How could the machine be a hazard?

Answer:

1. Flying chips from material being processed
2. Splashes from material being processed
3. Caught in machine
4. Machine failure

Question:

What are the hazards associated with machine movement?

Answer:

1. Rotating parts
2. In-running nip points
3. Reciprocating parts
4. Transversing parts

Question:

What are the hazards associated with machine action?

Answer:

1. Cutting of various materials
2. Punching materials
3. Shearing of materials
4. Bending of materials

Question:

What are some less obvious but equally important machine hazards?

Answer:

1. Electrical system
2. High-pressure fluids
3. Noise
4. Cutting fluids

NOTE TO DISCUSSION LEADER:

The point of operation is the obvious area to guard. Remind the group, however, that we must remember the mechanisms that produce motion may need safeguarding as well.

Question:

What are some requirements for safeguarding?

Answer:

1. Prevent contact with dangerous moving parts;
2. Be durable and easily secured to the machine;
3. Not create or be a hazard itself;
4. Not slow operator's normal activities

Question:

What are the different types of guards?

Answer:

1. Fixed
2. Interlocked
3. Adjustable
4. Self-adjusting (as material is processed guard moves)

Question:

What are some safeguarding devices?

Answer:

1. Presence sensing – optical or radio frequency
2. Pull-back or restraint devices
3. Two-hand controls
4. Interlocked gates

Question:

What are feeding and ejection methods?

Answer:

1. Automatic feed
2. Semi-automatic feed
3. Automatic ejection
4. Semi-automatic ejection

Question:

What are other available methods?

Answer:

1. Location or distance
2. Awareness barriers
3. Miscellaneous protective shields
4. Hand feeding tools and holding fixtures

Question:

What are some additional concerns to consider when operating machines and equipment?

Answer:

1. Proper training
2. Wearing proper protective equipment
3. Wearing clothing appropriate for the job
4. Following safe and proper procedures
5. Taking the necessary time to do the job right

NOTE TO DISCUSSION LEADER:

Remind the group that operating machines and equipment safely requires a combination of appropriate machine safeguarding, using appropriate judgment and vigilance to avoid hazards. Also, review lock-out/tagout procedures.

RESOURCES:

Concepts and Techniques of Machine Safeguarding, OSHA 3067, U.S. Department of Labor, OSHA, 1 992(Revised).

Machine Guarding-Assessment of Need, NIOSH, 75-173.

Machine Safeguarding, National Safety Council, 1993.

Machine Guarding, Coastal Video Communications Corp., 1994.

Safeguarding Concepts Illustrated, 5th Ed., National Safety Council.

MACHINE GUARDING QUIZ

1. A machine operator might make direct contact with a machine hazard because of inattentiveness. *T or F*
2. Rotating parts of a machine may present a hazard to operators if not properly safeguarded. *T or F*
3. Machine noise and cutting fluids may, if not properly safeguarded, present a hazard to the machine operator. *T or F*
4. Machine safeguards should not interfere with normal operation of the machine. *T or F*
5. An interlocked barrier or gates are examples of appropriate machine safeguarding. *T or F*
6. With all machine safeguarding functioning, the operator doesn't need to be concerned about personal protective equipment or appropriate clothing. *T or F*

MANUAL LIFTING SAFETY

Handling of materials accounts for 20 to 25 percent of all occupational injuries, according to the National Safety Council. These injuries occur in every part of plant operations, not just the warehouse or stockroom.

NOTE TO DISCUSSION LEADER:

Before the discussion:

1. Analyze injury and illness records such as OSHA 300 logs, for evidence of cumulative trauma disorders and back overexertion injuries;
2. Further identify problem areas by reviewing internal accident investigation reports, medical reports, employee complaints and walk-through surveys.
3. Compile a list or examples of items required to be manually lifted, such as containers, boxes, or drums;
4. Make a list of manual lifting aids, such as conveyors, hand trucks, carts, dollies, rollers and slides;
5. If possible, video tape or take pictures of employees lifting items used in their work areas. Use this tape later to identify workstation deficiencies.

Review and discuss injuries that have occurred as a result of material handling. Ask employees what could have been done to prevent them.

Question:

What are some possible ways to minimize material handling incidents?

Answer:

1. **Eliminate Handling.** Analyze the manual lifting operations. Find ways to eliminate manual material handling tasks.
2. **Planning.** Details of material handling should be planned before actual work is started. Ensure the area is unobstructed and free from all hazards. Select the correct equipment, identify and analyze steps that can go wrong and procedures to deal with potential problems.
3. **Design and Selection.** Material handling equipment must be properly designed and selected for the job. For example, a conveyor that moves material above workers must have overhead protection to protect the worker from falling objects.
4. **Use.** Equipment must be used properly and as intended. Loads on material handling equipment must not exceed safe load limits.
5. **Training.** Employees must be properly trained in the use of equipment. They should be able to demonstrate proficiency in the equipment's use before working alone.
6. **Environment.** Lighting, visibility, weather, terrain, material properties, such as toxicity and weight, must be taken into consideration before beginning the task.

Lifting Mechanics

When you lift an object, it's important to keep your back in alignment and balance. If you bend at the waist and extend your upper body to lift an object, you upset your back's alignment and the center of balance. Your spine is forced to support the weight of your body and the weight of the object you are lifting. You can avoid "overloading" your back by using good lifting techniques. For example, when you bend at the knees and hug the object close to your body as you lift, you keep your back in alignment and let your thigh muscles do the actual lifting.

Question:

List some DOs and DON'Ts that apply when lifting:

Answer:

1. DO perform manual lifting between knuckle and shoulder height
2. DO be sure you are in good physical shape
3. DO think each job completely through before beginning
4. DO get a good grip on the load before lifting. Test the weight before total lift. If it is too heavy, get help

5. DO get the load close to the body
6. DON'T twist your back or bend sideways while lifting
7. DON'T lift with arms extended
8. DON'T continue the lift when the load is too heavy.

NOTE TO DISCUSSION LEADER:

Show the group an example of proper lifting by demonstrating with a commonly used item from your area. Consider showing a videotape of a department employee(s) lifting an item from their area. Ask employees to critique the video.

Question:

In order, list proper lifting steps.

Answer:

1. Place your feet apart and with one foot in front of the other for good balance.
2. Bend your knees, not your waist. This will help you keep your center of balance and let your thigh muscles do the actual lifting.
3. "Hug" the load. Keep the load as close to your body as possible.
4. Lift gradually and smoothly without a jerking motion.
5. Avoid twisting. Twisting can overload your spine and may lead to a more serious injury. Make sure your feet, knees and torso are pointed in the same direction when lifting.
6. Place the load down exactly as it was lifted.

NOTE TO DISCUSSION LEADER:

Now is a good time to demonstrate proper lifting techniques. Request an employee to demonstrate the previous steps. Then ask employees to demonstrate proper lifting techniques using a day-to-day item from their work area. Be prepared to correct their lift, as necessary, and answer any questions.

Question:

What are some questions to ask yourself before you lift anything?

Answer:

1. Is it too heavy for me to lift alone?
2. Do I need to get help from a co-worker?
3. Do I need mechanical help, such as a hand truck, cart or lift?

NOTE TO DISCUSSION LEADER:

Use the following quiz for review.

MANUAL LIFTING QUIZ

1. What types of injuries can occur during material handling?
 - a. **Answer:**
 - (1) **Back injuries**
 - (2) **Other sprains and strains**
 - (3) **Injuries to the fingers and hands, including slivers, pinched point injuries, slipping and falling**

2. What are some ways to prevent these types of injuries?
 - a. **Answer:**
 - (1) **Proper lifting techniques**
 - (2) **Personal protective equipment, such as gloves, steel-toed shoes, material handling aids, such as lifts and hand trucks**
3. What factors should you consider when you plan a lift?
 - a. **Answer: (each of the following)**
 - (1) **Size and weight of the object or load**
 - (2) **Position of the object**
 - (3) **Duration of the lift**
 - (4) **Frequency of which the lift must be repeated**
4. Should you plan your body position before you actually lift?
 - a. **Answer: Yes, you should handle materials twice – once in your mind and again with your hands.**
5. Some lifting situations make it difficult to keep the load close to your body. What should you do?
 - a. **Answer:**
 - (1) **Use assistance – a hand truck, hoist, forklift or other mechanical means**
 - (2) **Ask a co-worker for assistance**

MOTOR VEHICLE OPERATION

by Amy Stewart

With the mobile society that we live in today, everyone has some experience or at least an opinion on the subject of operating a motor vehicle. Motor vehicle safety often bridges issues that are exciting and personal as well as educational.

NOTE TO DISCUSSION LEADER:

Lead the discussion with this objective for motor vehicle operations in mind:

to use good sense, keep alert and drive defensively.

Question:

What is the leading cause of death on company time?

Answer:

The leading cause of death on company time is motor vehicle accidents.

Question:

In what places is it important to use good driving habits?

Answer:

1. Driving on public roads or company property;
2. Driving autos or trucks;
3. Operating powered-industrial trucks;
4. At all times.

NOTE TO DISCUSSION LEADER:

Use the following guide to introduce your small group discussion.

“Pet peeve” Warm-up Activity: Break into five groups and discuss:

1. What do other drivers do that irritate you?
2. How do you respond to those actions?
3. What would a defensive driver do in order to avoid a crash?
4. Choose the best illustration / discussion and report to the large group.

NOTE TO DISCUSSION LEADER:

This activity should stimulate awareness and foster group discussion. There is reason to believe that a person drives in a way that corresponds to the way he or she lives. How people interact in this session may also indicate how they operate a motor vehicle.

For example, before a person speaks, is there a visual assessment and yielding to other participants in their environment? This compares to interacting with traffic. How do they communicate their intentions? You may want to point out how showing courtesy to other members of the group may reflect how they operate their vehicles and treat other drivers.

NOTE TO DISCUSSION LEADER:

Consider using a flip chart or chalkboard for the presentation of the “Smith System.” A way to remember five keys to defensive driving, called The Smith System, is to remember the phrase: **All Good Kids Like Milk**. Each first letter (boldfaced) is the first letter to the five keys of the Smith System:

Aim High in Steering

Question:

Where are we supposed to look and how far ahead?

Answer:

One and one half city blocks in urban areas or at least 1/4 mile at high speeds. Aiming high keeps you on a straighter path than simply checking in the immediate area in front of you.

Get The Big Picture

Question:

What should we aggressively search?

Answer:

Seek movement of others and anticipate the worst. Drivers may not stop where expected. Assess the potential risks around you – in front, behind, sides and instrument panel.

Keep Eyes Moving

Question:

How often should you check in the mirrors?

Answer:

Every 3 to 5 seconds. Reduce highway hypnosis and fixed stares by focusing ahead, behind, side-to-side and internally.

Leave Yourself an Out

Question:

How do you “Leave Yourself an Out”?

Answer:

Time lights (stale green), flashing “Don’t Walk” signs and other traffic to blend and flow more smoothly. If you do have to stop, think ahead and maintain space. Keep both hands on the wheel to maintain control, be prepared and avoid surprises.

Make Sure They See You

Question:

How do we communicate with our vehicles?

Answer:

1. Vehicle position
2. Vehicle condition
3. Lights
4. Horn
5. Sign language

NOTE TO DISCUSSION LEADER:

Assign each small group a key step from the Smith System. Discuss the following questions in each group:

Question:

What things get in our way and prevent us from implementing the Smith System?

Answer:

1. Traffic density
2. Road conditions
3. Other road users
4. Weather
5. Ourselves

Question:

List examples of circumstances or common elements of life that affect our perceptions.

Answer:

1. Fatigue and stress
2. Passengers in the vehicle
3. Emotions and attitudes
4. Attention or awareness
5. Sickness and over-the-counter drugs or prescriptions

Question:

What consequences can result from these circumstances?

Answer:

Different kinds of hazardous situations and incidents, both on and off the job.

Question:

As safe-minded individuals concerned with safe operation of motor vehicles, what can be done to compensate for these elements?

Answer:

1. Rest and eat well
2. Breathe deeply and focus on the immediate task
3. Choose not to drive if you feel you are at risk
4. Work it out, talk it out and have a “zero-accident” attitude

Question:

Create a slogan that promotes defensive driving and share why it works.

Answer:

“Drive toward others as you would have them drive toward you.” Driving defensively is a series of responsible actions that leads to desirable behavior in a safe lifestyle with a vehicle.

NOTE TO DISCUSSION LEADER:

Hold a debate. Split the group in half and assign one side the “Pro” side of wearing safety belts. Assign the other side the task of rebuttal. Tell all participants to set aside personal opinions and role-play by listing reasons for or against wearing safety belts.

Set aside enough time for each side to prepare and choose a spokesperson. Give each spokesperson an opportunity to speak without interruption, then invite the rest of the team to add to the argument. As the conversation increases, remind the group how they are interacting may be how they drive during a rush hour. Apply the Smith System to the debate. Conclude by reiterating the positive reasons for wearing safety belts.

Summarize by charging each person with the responsibility of operating a company vehicle as if that person owned it and were financially responsible for costs incurred for any type of accidents, incidents or crashes.

Get the big picture

Leave yourself an out

Keep eyes moving

Make sure they see you

PERSONAL FALL PROTECTION

NOTE TO DISCUSSION LEADER:

Bring at least one piece of the three elements of the personal fall-arrest system (harness, lanyard and anchor) the group uses. As an alternative, use photographs, drawings or literature about the items.

Share useful information about each piece of the arrest system by referring to the definitions that follow this note.

Survey the group's work area and write down areas and tasks requiring personal fall protection. Remind the group that if your company's fall protection regulations are more stringent than OSHA's minimum requirements, your facility's standards supercede OSHA's.

Lead the discussion using the following "Questions and Answers." Use a chalkboard or flip chart to write down the group's answers. Or, ask someone to write the answers down and read them back for discussion before going on to the next question.

Allow five minutes at the end of the discussion for the group to complete the quiz.

Definitions:

Personal fall-arrest system: A system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body harness and may include a lanyard, deceleration device, lifeline or suitable combinations of these.

Harness: A unit of straps, hooks, rings and belts designed to adjust to fit over the shoulders, around the waist, around each leg and across the back so the load from a fall will be widely distributed over the body of the wearer.

Lanyard: A rope, line, or strap having a clasped hook at each end, and designed to withstand the stress of a person free falling 6 feet. A lanyard should not let the person fall more than 6 feet.

Anchor: That point to which a lanyard can be attached. The anchor point must have a minimum shock load resistance of 5,000 lbs.

Question:

When is fall protection required?

Answer:

1. If there is an unguarded edge or hole into which a worker could fall 6 feet or more †
2. If you could land on a hazard, fall protection is required at all times
3. Within six feet of open edges of roofs or mezzanines, loft doors, in man lift buckets, or on any ledge

Question:

If a personal fall-arrest system is necessary for a task, what should you do before putting it on?

Answer:

1. Inspect the equipment. If it's dirty or damaged, don't use it
2. Check possible anchor points to ensure they will hold the required load, (Refer to previous anchor definition.);
3. Have another person help adjust it when you put it on.

Question:

What must you do each time you remove a personal fall-arrest system?

Answer:

1. Inspect the harness and lanyard for any damage
2. Clean the harness and lanyard (if needed) and hang them up to dry.

† 6 feet is the requirement for construction based on OSHA standards but 4 feet is the height at which fall protection is required for employees working in General Industry.

PREVENT FALL ACCIDENTS

During the minute it will take you to read this safety reminder, four persons in the United States will either be killed or injured by fall accidents. More people are killed each year by fall accidents than by any other non-vehicle accident cause! You don't have to have to fall from a high place to be killed either. Most falls occur due to loose objects on floors and irregularities that affect the smoothness of other level surfaces. Floor openings, stairs, ladders, scaffolds, inattention, poor housekeeping, unnecessary haste and falls from equipment and high places are also important factors among those contributing to fall accidents. The number of fall accidents may be reduced if you will simply observe the following procedures:

1. Check your work area and keep it CLEAN AND ORDERLY. Eliminate trip hazards and wipe up spills.
2. Watch where you're going and stay alert.
3. Walk, don't run. Use the handrail on stairs.
4. Don't jump from high places or moving vehicles.
5. Use the right ladder the right way for the job. Avoid makeshift rigging.
6. Protect people from falling through holes in the floor.
7. Observe scaffold rules.
8. Report all safety hazards to your supervisor immediately.

PREVENT SPRAINS AND STRAINS

Athletes in training know their abilities and their limitations, because going beyond what is physically possible leads to strained and sprained muscles and ligaments. Those injuries could put the athlete out of competition.

Your job may include lifting and carrying heavy material. You should be aware of how much you can do in order to avoid an injury that could put you on the bench for a while.

Sprains and strains can occur anywhere – in the workplace, during recreational and sporting events, and at home.

In order to understand these injuries, it is necessary to understand a little about the makeup of the human body.

The human body is designed with some very sound mechanical principles. It is a combination of a number of systems that complement each other. Today we are going to discuss just two of these – the skeletal and muscular systems. Because they are so closely related, physicians refer to them as the muscular-skeletal system.

The skeletal system consists of the 204 bones of the body. The bones make up the framework of the body and determine its size. The skeletal system varies from individual to individual. Some people have short thick bones; others have long, rather thin bones. There are a few people who may be missing one bone or another, but in general the number of bones is 204.

This solid framework keeps the human body from being a blob, such as a jellyfish. The skeletal system acts as a support for the other systems in the body. It also serves as an anchor for the muscular system.

The muscular system is made up of all the muscles of the body. Muscles are the motors that move the bones and make it possible for the body to move and stand erect. There are many different muscles, but today we are going to discuss those that are most commonly sprained and strained.

When doctors talk of sprains and strains, they speak of ligaments and tendons.

Ligaments are tough, fibrous, cord-like materials that connect bone to bone. Ligaments most commonly are associated with joints, with one bone connecting to another – at the elbow where the forearm is joined to the upper arm, at the knee, at the shoulder, at the wrist, at the hip. Wherever there is a joint, you'll find ligaments. Tendons are of similar material, but their function is to attach muscle to bone.

Muscles of motion are almost always found in pairs, and usually cross the joints of bones. When one muscle contracts to move a part of the body, its partner relaxes. You most likely have at one time or another experienced a cramp in your leg or foot. This occurs when the body is confused and contracts both muscles at the same time. Because they are balanced, each tries to overcome the other's resistance without success, and this "ties you up in knots."

This background information will help you understand why sprains and strains happen. You probably all know about sprained ankles and strained elbows, but the back is an area where strains and sprains often occur. Back sprains and strains are also the most costly to the individual.

A strain occurs whenever a muscle is stretched beyond its limit. Muscles do a great deal of work. However, they must be conditioned if they are to perform in a given way. Professional athletes condition their muscles through rigorous training. We also must condition our muscles. A worker who is accustomed to manually handling a large number of pieces of material in a given workday can do so with ease. Those of us who have different duties would find it difficult to do that same amount of work without paying for it with aching muscles. If we should continue to do the work, however, we would soon be conditioned and be able to perform the job without pain.

However, even the conditioned athlete or worker cannot exceed the limitations of the muscles. When a muscle is stretched too much, the ligaments pull and sometimes even tear. Stretched ligaments and tendons are termed strains. A sprain is when tearing has occurred.

The industrial setting provides many opportunities for the occurrence of sprains and strains; the most common is material handling. We all handle material in one way or another. Even the office worker is involved with material handling when picking up a package, box or chair to move it.

Let's take a minute to consider all the operations in our area that might involve material handling and how they might cause a sprain or strain.

NOTE TO DISCUSSION LEADER:

Try to get employees to tell you about potential sprain and strain operations in their areas. Do not argue the point or dismiss any item; just list them.

Material handling strains and sprains often is caused by overexertion. You can see from the list we just made that we do have the potential for sprains and strains in our area.

Other movements can also cause sprains and strains – overreaching or overextending a part of the body; reaching over something to pick up a load; or trying to reach a top shelf without using a proper stool or ladder. Can anyone give me an example of a strain or sprain case? It doesn't have to be work related; remember, these injuries also happen off the job.

NOTE TO DISCUSSION LEADER:

Try to get someone to tell about a sprain or strain injury. If necessary, tell of an injury yourself.

What can we do to minimize these injuries? Well, this meeting is a beginning. If we understand what causes sprains and strains, we are better equipped to prevent them.

A few basic rules to remember are:

1. Before you begin, size up the job. Is there a better way? Look into ways to eliminate or reduce lifting, lowering, pushing, pulling and carrying whenever possible.
2. Get help when the load is heavy, awkward or unstable.
3. Make sure there are no slipping or tripping hazards in your work area or around your home. The sudden jerk caused by a slip or trip can cause a sprain or strain.
4. Don't overextend yourself – use a step stool or ladder when lifting above shoulder height.
5. Try to keep yourself in good condition.
6. Take a lesson from athletes – don't rush into a job cold. Warm up your muscles first.
7. Hold the load close.
8. Avoid twisting your body while handling a load. Work smarter, not harder – it's easier and safer.

NOTE

Use this space to list specific points or problems you wish to discuss during the safety meeting.

DISCUSSION LEADER _____ DATE _____

THE UNDERSIGNED CERTIFY THAT THEY HAVE ATTENDED THIS SAFETY MEETING AND UNDERSTAND THE HAZARDS AND INSTRUCTIONS IT COVERED.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

PREVENTING SLIPS, TRIPS AND FALLS

We have all heard examples about the seriousness of slips and falls in our business. They happen suddenly. They're totally unexpected. And the result of a slip or fall can be a painful and possibly permanent injury that could change your entire life.

Falls kill more people each year than any other kind of accident. Most of these accidents result from slips or trips that happen at floor level, rather than from high places. About 75 percent of these slips and trips occur on walking surfaces, such as floors, stairs and sidewalks.

What affect does this have on the motor carrier industry? A California study showed that 3½ times as many persons were killed in falls as in motor vehicle accidents.

Basically, slips and falls can happen almost anywhere and can be caused by a number of things. Trying to catch your balance when you slip, for example, can pull muscles, tear ligaments and cause permanent damage to your back, even if you avoid falling down.

Standing on a bumper to clean your windshield is an open invitation for a bad slip or fall. Be especially careful of your footing on ladders attached to trucks and catwalks, and always face the ladder when climbing or descending.

Most trips, slips and falls are the result of unsure footing, and not exercising caution or keeping alert. They can occur on any surface that is covered with mud, snow, water, oil, ice, grease or any other slippery substance. So whenever you see spilled liquid on a dock or garage floor, clean it up immediately.

When entering or getting out of a cab, footing stability can be jeopardized. Always face the cab when going in or out, and use the handgrips.

Mats, rugs and runners are also hazardous if they can slip or slide, or are torn, curled up or loose.

Uneven or defective surfaces, littered floors, telephone wires and electrical cords, open drawers or anything else that projects from the walking surface may cause a fall.

Stairways present another tripping problem, whether they're a poorly lighted set inside a building or steps outside from the road to the dock. Material, cartons, boxes or other items should not be stored on stairs.

Proper lighting, without glare, shadows or violent contrasts between floor areas, and the condition of workers' shoes are also important.

Falls can be prevented by using common sense and remembering:

1. Not to climb over freight or use it as a makeshift platform
2. Not to jump off docks or trucks
3. To carry only what you can reasonably handle and keep your balance
4. To stay alert and always expect the unexpected at all levels

Be careful. Watch your step. Report all hazardous conditions to your supervisor immediately, unless you can take care of them. The important thing is not to let slips and falls put you down.

PROPER HOUSEKEEPING

A clean work area is a must for an injury-free workday. Proper housekeeping will decrease the chance of an injury or accident, no matter what type of work is being done.

A dockworker lost a total of 13 weeks of work because of debris left around the apron of a truck terminal. He jumped off the edge of the dock, taking a short cut instead of walking to the steps, and did not look before he jumped. A discarded pallet had been tossed over the edge of the dock between two trailers. When he landed on the pallet his right leg went out from under him. He broke his right ankle as he landed.

He was back on the job after seven weeks and worked eight days before being injured again. This time he was switching trailers in the terminal yard. As he was hooking up a trailer at the dock, he walked around the trailer to remove the safety chocks from the wheels. A piece of pipe had been left on the ground near the trailer. He injured his right ankle when he stepped on the pipe. This time he lost six weeks of work.

The lost wages, which will never be made up, surely presented a hardship for his family.

Another worker was pushing a four-wheel cart on the dock. He could not see the oil spot in front of him. When he stepped in the oil he slipped and hit his head on a large metal casting, suffering a concussion that kept him off the job for 10 weeks.

In another near catastrophe, dirt and debris had collected in the pit under the dock plates at a terminal. A discarded cigarette fell into the pit, starting a fire. Luckily, a worker nearby put out the fire before it could spread. This situation could have been worse, because the trailer was parked next to a shipment of flammable paint.

Many fires are started from oil or debris that has collected in corners or pits where it might go unnoticed. A spark or ash from a cigarette could start a fire, which might be difficult to detect.

Whether it's simply walking to the steps of the dock or climbing into a cab, you should realize that housekeeping practices cannot be neglected. For example, it's a nice feeling to climb into a cab with no cigarette butts, pop bottles and cans, or crumpled paper containers on the floor or under the seat. It also gives you a lift to see that all the glass is free of dirt, grease and dust. It's also important to leave the cab the same way for the next driver.

Good housekeeping is more than a nice feeling – it's a safer way to do things. And it also helps prevent catastrophes, like a fire caused by tossing a cigarette butt into the pit, where papers and rags have been allowed to accumulate; or a near-miss caused by a bottle or can rolling under your feet after a turn or quick slowdown.

No matter what kind of work you do, clean and hazard-free work areas give you a feeling of pride in your job and yourself. As professionals, you know that by insuring your safety you are banking on an injury-free workday, because it's the only way to go.

Our families rely on us for a steady income. The best way to insure this is to keep our work area clean. The wages lost because of an accident is money lost forever. Every injury caused by housekeeping can be prevented if everyone helps to keep the work area clean. When discarding waste of any type, be sure to deposit it in the proper container. By keeping aisles clear and floors clean we can help to insure our safety by creating a safe and more productive work area.

SAFEGUARDS FOR ELECTRICAL USAGE

Electric energy can be a powerful ally, but as an unseen and uncontrolled enemy it can also be a formidable foe. All too often we limit our safety thinking to matters of frayed insulation, grounding, fusing and electric shock. But to be completely safe we must apply other safeguards as well.

1. **NEVER** energize switches or controllers while protective covers are removed.
2. **ALWAYS** de-energize circuits and LOCK OUT switches before effecting electrical or mechanical repairs.
3. **FURTHER** protect yourself from unexpected starting by tagging. The de-energized electrical control or switch with a sign warning: "Men repairing this equipment – DO NOT ENERGIZE."
4. **WHENEVER** the presence of vapor, gas or dust calls for "explosion proof" equipment, be sure that any portable equipment or trouble lights taken into the area are approved by Underwriters Laboratory for the atmosphere existing.
5. **KEEP** electrical equipment free of dust, oil, grease and away from moisture, flammable liquids and combustible materials.
5. **REPORT** electrical difficulties promptly. **DO NOT** attempt electrical repairs yourself unless you are a completely trained electrician and know how the circuit functions.

SAFETY RULES: DRIVING – COMMERCIAL TRUCKS

Our company policy of safety requires that everything possible be done to protect employees, customers and visitors from accident. Safety requires cooperation and participation of every employee. Failure by any employee to comply with safety rules will be grounds for corrective discipline. Safety designated personnel shall insist that employees observe all applicable Company, State and Federal safety rules and practices and take action as is necessary to obtain compliance.

A. MECHANICAL SAFETY RULES

1. Always complete the daily *Driver's Vehicle Inspection Report*. Turn the report into your immediate supervisor or manager as instructed.
2. You should daily check for broken glass, water leaks, oil leaks or any other dripping fluids.
3. Check your oil and water prior to using your vehicle each day. If oil or water is low, add as needed.
4. When starting the engine, do not race it while it is cold. Allow the engine to warm up before using the truck. Most wear to an engine occurs in the first few minutes of operation.
5. Listen for any unusual sounds or noises, such as squeals, hisses, pings, tappings or misses.
6. If there is any indication of low oil pressure, report it immediately. Do not drive the vehicle.
7. When driving a truck with air brakes, allow the air pressure to build up to 90 pounds before attempting to move the vehicle. When air pressure has built to a maximum of 115-120 psi, depress the brake pedal 5 times to make sure there is sufficient air for 5 applications before the pressure drops to 70 pounds.
8. If the truck does not have an automatic bleeder for the air tanks, you should bleed the air tanks every night to remove oil and moisture from them. When bleeding air tanks, use a small container to catch any oil that may run out. Do not let this run onto the asphalt paving or on the ground.
9. If there are problems with your truck and you are not certain how to take care of it or what to do, shut it off and call the shop. Truck repairs can be expensive and you should avoid further damage to the truck whenever possible.

B. RADIO OPERATIONS

1. Only authorized personnel may use the radio.
2. Only messages necessary for the efficient operation of our business and messages pertaining to safety of life and the protection of property may be transmitted.
3. False call signs must not be used, nor may personal messages be transmitted.
4. Obscene or profane language is not allowed.
5. Direct truck-to-truck calls are unlawful.

C. GENERAL RULES

1. Prevention of injuries and property damage are of highest importance. Never trade time for prevention. Rushing to get somewhere can cause accidents. It is important to meet our customers time expectations, but not at the sacrifice of safety.
2. Always be courteous to our customers. Remember that they pay your salary and ours.
3. Do not operate a truck if you had a rough night and are reporting in too tired, sick, or feeling bad for some reason. Report your condition to your supervisor.
4. If you have extreme worries or problems, don't drive a truck. Seek help from your doctor, minister or supervisor. Personal problems, which are severe, can mean you will be dangerous on the highway to yourself and others.
5. Traffic violations indicate unsafe driving. Driving records will be checked on a regular basis to assure that our drivers are the best possible. A bad driving pattern in personal driving reflects on the type of driving you will do on the job. If you receive too many violations, it can be grounds for suspension or termination of your job.
6. Any violation of the traffic laws when there is an accident will make you contributory to the cause of the accident and you can be held legally liable. Even 5 miles per hour over the speed limit is considered negligence.
7. Make a complete stop at all lights and stop signs.

SAFETY RULES: TRUCK OPERATORS & DRIVERS

Our company policy of safety requires that everything possible be done to protect employees, customers and visitors from accident. Safety requires cooperation and participation of every employee. Failure by any employee to comply with safety rules will be grounds for corrective discipline. Safety designated personnel shall insist that employees observe all applicable Company, State and Federal safety rules and practices and take action as is necessary to obtain compliance.

Each driver should complete a "Driver's Daily Vehicle Inspection Report".

A. GENERAL DRIVING RULES

1. Do not operate a vehicle if you are fatigued or ill.
2. Do not operate a vehicle if you are taking medication whose container label indicates that the medication may cause drowsiness or other negative side effects.
3. Do not drive under an overhang without ascertaining proper clearance.
4. Do not jump from your vehicle; always maintain 3 points of contact (2 hands and a foot or 2 feet and a hand).
5. Do not sit on your wallet when driving, as this will eventually result in back pain.
6. Always scan your mirrors and gauges. Watch for pedestrians, animals and road signs.
7. Look at the vehicle ahead of you as well as what's ahead of it.
8. Never assume another vehicle that has its blinkers on will turn in that direction.
9. Check your rear view mirror and blind spots before changing lanes.
10. Keep your ears open for sirens, horns, screeching brakes, or other noises around you.
11. Be aware of the right of way laws of the state you're driving in. Remember that you never have the right of way until the other driver gives it to you.
12. When making left turns, give the oncoming traffic the right of way.
13. When making left turns, inch out into the intersection and keep your wheels pointed straight ahead, then turn when it is safe to do so.
14. Speed limits are for ideal conditions. Reduce your speed based on visibility, traffic, weather and road conditions. It is against the law to exceed the speed limit, even to pass.
15. One hundred feet before you make a turn or change lanes, you should signal with your blinkers.
16. Keep a safe distance behind the vehicle ahead of you. Use this simple method of counting to check yourself. Pick a fixed point for the vehicle ahead of you to pass by. As soon as the vehicle passes the designated point, start counting by saying, "One thousand one, One thousand two, etc."
 - a. Small truck should be 3 seconds behind the vehicle ahead.
 - b. Heavy vehicle should be 4 seconds behind the vehicle ahead.Remember that these distances are for ideal conditions. Bad weather demands even greater caution.
17. Always use your safety belt.
18. Never drink and drive. Use of alcohol can be grounds for dismissal.
19. Never use drugs and drive. Use of drugs can be grounds for dismissal.
20. When driving a heavy-duty truck, signal your turns early, leave plenty of airspace, and always watch vehicles entering and leaving your blind spots.
21. Watch for sudden stops and starts when near passenger buses.
22. Always yield the right of way to an emergency vehicle. Pull to the right and let it pass. If you can't pull to the right, stay put and let it go around you.
23. Watch out for motorcycles. Remember they have less protection than you do. Give them plenty of room on the road.
24. Do not try to start from a stopped position too fast. Accelerate smoothly and consistently.

25. Do not ride the clutch of your truck. When stopped, place the truck in neutral and use the foot brake.
26. If stuck in sand, mud, snow, etc., do not keep churning the wheels. Stop before you break an axle. Use boards under your wheels or call for help.
27. When using the horn to signal to someone you are there, a friendly “toot-toot” is much better than a panic producing blast.
28. Do not go through changing traffic lights just before they change. Control your speed and be able to stop when the light changes to yellow.
29. Always turn from the lane nearest the direction you will turn. The far left lane to turn left and the far right lane to turn right. Be especially careful if you have to swing out into the next lane to make the turn.
30. If stopped on a hill, remember the danger of using air brakes for parking. If the truck loses air pressure, it can roll into other vehicles - even though it is “in gear”.
31. If your truck runs off the road onto soft shoulders, slow down to about 10 miles per hour before trying to get back on the pavement.
32. When stopping in traffic behind another vehicle, keep the vehicle’s back wheels in your sight. This keeps distance between you and them and if you are rear-ender, it keeps you from being “pushed” into the vehicle in front of you.
33. Never stop on train tracks or try to go around barriers.

B. WEATHER AND SPECIAL DRIVING CONDITIONS

1. When driving at night, don’t drive so fast that you see things too late to react to them. Drive so you can react to what you can see in your headlight range.
2. Keep your windows clean so that you can see clearly.
3. When driving during “rush hours”, be alert. Others may not be paying as close attention as usual. Drive with the flow of traffic.
4. When driving on hills, be extra careful. It is difficult to see oncoming traffic in the valleys and dips of the road. Pass only when you can see clearly and there is a broken line on your side of the road.
5. Wear sunglasses on bright sunny days so that the glare does not block your vision.
6. Keep your sun visor pointed down when the sun is bright and point it away from your face.
7. Whenever there are construction signs, slow down and watch for workers, detours, sloped shoulders and slow traffic.
8. Turn on your wipers, defroster and lights in rain or fog.
9. Use the low beams for fog to avoid too much glare.
10. Reduce speed in rain or fog to be sure you can see far enough ahead to respond to problems.
11. If fog is too heavy or the weather is very bad, pull over and stop if necessary.
12. Check your tires for wear when wet weather season is coming. Worn or underinflated tires can glide or “sail” over a wet surface. We call this “Hydroplaning”. If you “Hydroplane”, ease off the accelerator, don’t hit your brakes, and ride it out.
13. When driving on curving roads, never try to pass on a solid yellow line. If a vehicle tries to pass you, slow down, stay to the right, and let it by.
14. Reduce your speed when driving in snow or ice. Traction can vary. Be especially careful on bridges.
15. Use snow tires or chains where needed.
16. Wet roads are slippery, sometimes just like ice. To control a skid, remember to steer in the direction of the skid.
17. Be especially cautious on paydays, any Friday after lunch and late on Saturday night due to people drinking.

C. BACKING

1. Do not back if it’s not necessary.
2. Avoid driving into a narrow street, dead end alley, or driveway, which will require backing to get out.
3. Look all around your vehicle before getting in; do a “circle check”. Back immediately after completing your “circle check.”

4. Do not back if your vision is obstructed; get out and check the situation thoroughly before backing.
5. When backing from sunlight into the shadow of a dock, stop for a few minutes and allow your eyes to adjust to the change in light.
6. Back up slowly.
7. Do not back into moving traffic.

D. PULLING FROM CURBS

1. Look to front and rear for approaching traffic immediately before pulling out.
2. Signal before pulling from the curb.
3. Do not pull out into the path of oncoming vehicles, causing them to change speed or direction.
4. Continuously observe traffic while pulling out.
5. Always check clearances from other parked vehicle(s) before pulling out.

E. SKIDDING

1. Never drive too fast for road and weather conditions.
2. Always keep safe following distances - remember to keep the 3 to 4 second rule.
3. Anticipate water on and under bridges, in gutters, ruts and near curbs.
4. React calmly, but quickly, to an initial skid. "Control" the skid by steering the vehicle in the direction you want to go (do not over steer) and stay off the brake and gas pedal.
5. Observe precautionary speed postings.
6. Slow down when approaching a curve.

F. PASSING

1. Have enough clear space to pass safely.
2. Move fast enough when starting pass to return to lane in a safe amount of time.
3. Do not violate a no passing left lane marking.
4. Do not pull back into the lane too soon - be clear of the vehicle passed.
5. Avoid passing on slippery road surfaces.
6. Do not pass on the right.
7. Avoid passing more than one car at a time.
8. Do not pass on a curve.
9. If being passed, slow somewhat to allow the vehicle passing to return to the lane safely if necessary.

G. HEAD-ON COLLISIONS

1. Immediately begin evasive action when the other driver crosses the center of the road.
2. Blow horn if necessary.
3. Slow down quickly and drive to extreme right side of road and stop if necessary to avoid the collision.

H. PEDESTRIANS

1. Anticipate pedestrian(s) stepping in front of your vehicle when driving through congested areas.
2. Keep necessary clearance between your vehicle and parked cars.
3. Do not pass a vehicle, which has stopped to allow a pedestrian to cross.
4. Check location of pedestrians before starting on green signal or riding through a yellow light.
5. Be aware of activities of pedestrians on edge of road or sidewalk.
6. Give pedestrians the right-of-way.
7. Sound horn to alert pedestrian of vehicles' approach.

8. Do not pass a stopped school bus.
9. Avoid simply “driving through or turning” at an intersection when glare from the sun blinds your visibility.

I. AVOIDING ACCIDENTS WHEN PARKED

1. Do not park on the wrong side of the road.
2. Avoid parking too close to an intersection.
3. Do not unnecessarily park on traveled portion of highway, curve or hill.
4. Warn traffic by flag, flare or flasher lights of an emergency stop.
5. Park as close to curb as possible.
6. Turn wheels toward curb and set emergency brake.

J. LOADING AND UNLOADING

1. Do not unload your truck without first setting the hand brake and chocking the rear wheels.
2. Never attempt to open rear or side doors of a trailer before first tapping the doors with tightly closed fist. A change from a hollow to a muffled sound could indicate that your load has shifted.
3. Never stand directly in front of a swing door when opening, always stand to the side. Always lock doors firmly in place to prevent them from swinging.
4. Always release load bars or other product restraining devices slowly.
5. Place heavier loads on the floor of the vehicle and not on shelves.
6. Do not try to stop falling products unless you can do so safely.
7. Tighten your stomach muscles and use both hands when closing trailer roll up doors.
8. Secure hand cart inside or on vehicle before driving.
9. After hitching your trailer, always examine 5th wheel lockpin to make sure that it is locked in place. Test the security of the lockpin by driving the trailer forward slowly.

K. FUELING

1. Turn the vehicle off before refueling.
2. Do not smoke while refueling a vehicle.
3. If you spill fuel on your hands, wash with soap and water.
4. Clean up small spills from around fuel tanks with paper towels or, rags before climbing onto tank.
5. If a large spill occurs, do not walk through it; follow your company’s reporting and clean up procedure.
6. Always stay in attendance when truck is being refueled.

L. ACCIDENT PROCEDURES

1. Check for injuries. Move out of traffic. Administer first aid if you’re qualified.
2. Block the scene by warning passing vehicles of the accident with triangles, flares, etc.
3. Call the police or have someone else do it. They will get an ambulance if needed.
4. Stay nearby your vehicle.
5. Exchange information with the other driver(s): Name, insurance company, and driver’s license number.
6. Do not admit guilt to anyone, no matter who is at fault. Get the name of a witness if you can.
7. Notify your dispatcher or supervisor at once.

SCAFFOLDING

We all know that erecting scaffolding for a building requires many truckloads of lumber and a small army of carpenters and laborers. And most of us know the safety rules that we must follow when erecting scaffolding. But let's review these practices so we don't forget them.

Always anchor a pole scaffold every 25 feet in length and height.

Free standing towers greater in height than three times the least dimension of the base should be guyed.

Foundation sills should be placed under all scaffolds that are set on earth.

Planks should be secured to the scaffold when left unattended.

The inherent strength and stability of the scaffold frame often lulls the unwary and unskilled worker into a false sense of security; this can lead to equipment abuse, which in many cases has proved disastrous.

Scaffolds contribute indirectly to many accidents, including falls from metal frame or hanging scaffolds. The number of falls can be reduced substantially if the surfaces on which employees work are kept in good condition, clean and properly guarded.

All steel scaffolding should be erected and used in accordance with the manufacturer's recommendations. Properly seating and locking all connections and using correct devices are extremely important.

Wood scaffolding must conform to safety code design and be in strict compliance with material specification and bracing.

Some of the causes and the control measures necessary to eliminate falls from scaffolds are:

1. **Cause** – standing on an overhanging plank. **Control** – allow plank to overhang bearer by not more than 12 inches.
2. **Cause** – stepping in the opening between staging planks. **Control** – maximum spacing between planks should not be more than 1 inch.
3. **Cause** – stepping from ladders to scaffold platforms. **Control** – ladder top should extend at least 36 inches above the platform level.
4. **Cause** – lack of guardrails. **Control** – use 2-by-4s or equivalent, substantially erected around the entire outside edge and ends at a height of between 38 and 45 inches. All scaffolds (steel and wood) more than 10 feet high should have guardrails and toe boards; if they are not provided, or if you think they are inadequate or unsafe, report the problem to your supervisor immediately.
5. **Cause** – moving rolling scaffolds with workers on top. **Control** – never allow anyone to ride on a moving scaffold.

A failure of scaffold planking is another source of injury. Each 2 inch plank should be scaffold grade, carefully selected, marked and tested, and used thereafter only for scaffold planking.

Housekeeping is just as important on scaffolds as it is on floors and aisle ways. Every year many serious accidents are caused by debris and other objects falling from scaffolds, or falling from other areas of the building onto the scaffold where employees are working.

Extreme care should be taken at all times if there is any chance that objects could fall from above; substantial overhead protection should be provided, either on the scaffold itself or projecting from the floor of the building immediately above the scaffold.

Toeboards should be provided around the exterior edges of the scaffold, and where it is deemed advisable, screening should be placed up to guardrail height to prevent materials from falling off.

Swinging scaffolds pose many problems in operation and maintenance. It is advisable to have one person in charge of the moving up and maintenance of scaffold machines.

Many scaffold accidents are caused by using improvised scaffolding — making scaffolds quickly or on the spur of the moment, or in an offhand way, such as putting one box on top of another on a steel scaffold, instead of installing two more steel bucks on the scaffold.

Before you work in or near high places, and particularly on scaffolding or with safety belts, always check the ropes, cables, chains or other holding devices for weakness caused by accident or normal wear. This can add a decided margin of safety to that already built into the equipment you are using.

When working in or near high places, you are responsible for your safety and the safety of your co-workers. Unsafe practices may not only injure the guilty party but also innocent persons below or adjacent to the accident. If you set a good example, others may follow it; this may save your life or the lives of others.

Safety in the use of scaffolds lies with the common sense of the workers using the scaffold. Very seldom is it the equipment that fails – it's the worker who fails to use the equipment properly.

NOTE

Use this space to list specific points or problems you wish to discuss during the safety meeting.

DISCUSSION LEADER _____ DATE _____

THE UNDERSIGNED CERTIFY THAT THEY HAVE ATTENDED THIS SAFETY MEETING AND UNDERSTAND THE HAZARDS AND INSTRUCTIONS IT COVERED.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

SHORT TOPICS FOR JOB BOX TALKS

A. Housekeeping

1. Each employee is responsible for housekeeping within the shop.
2. Keep floors clean and free from anything that may cause injury.
3. Never block aisles, passageways, fire doors, and fire extinguishers.
4. Keep the lunchrooms and washrooms clean.

B. Passageways

1. When walking in aisles, be alert for moving equipment and overhead loads. Moving equipment has the right of way.
2. Never stand in aisles to converse. Listen for warning horns.
3. Keep aisles clear of storage and debris.
4. Do not park equipment in front of exits.

C. Lifting and Handling Materials

1. Lift with your legs, not your back. Get a firm footing and a good grip on the object to be lifted. Lift slowly and steadily without jerking your legs.
2. Do not twist your back when lifting or handling material.
3. If the object is too heavy or bulky, ask for help. Help others when necessary.
4. Stack material in a safe manner.

D. Machinery Operation

1. Do not operate any equipment unless all protective guards are in place. Check all exposed parts.
2. Do not operate any equipment unless you are completely trained and have a driver's license.

E. Ladders

1. Be sure there is nothing on a ladder before you attempt to use it.
2. Be sure the ladder is long enough for the job.
3. Always face the ladder when ascending or descending.
4. When on a ladder, do not over—reach. It may roll or slip from under you.
5. Inspect a ladder for defects before using it.
6. Do not use a metal ladder or metal stand for electrical work.

F. Electrical

1. Only authorized personnel are permitted to do electrical maintenance work.
2. All electrical wires must be considered as being live wires until it is known if the wire is dead.
3. All portable electrical tools must be grounded.
4. Keep all wiring in repair and cover all open wiring.

G. Lift Trucks

1. Only authorized personnel are permitted to operate equipment.
2. Check brakes, steering, horns, water levels, and operation of the lifting units of the equipment before starting in the morning.
3. Always sound horn when approaching people or where there is a blind corner or aisle.
4. Excessive speeds cause accidents. Travel at a safe speed.
5. Even though you have the right of way over pedestrians, you are still responsible for the safety of fellow employees. Drive safely.

SLIPS, TRIPS AND FALLS

NOTE TO DISCUSSION LEADER:

The objective of this program is to lead a discussion of the second most frequent cause of occupational accidents, injuries and deaths, and to review prevention practices. Review reports from your facility's experience and present case studies to your group based on slip, trip or fall incidents.

Falls cause the second-highest number of occupational deaths each year. Falls are the most common cause of accidental death at home. Yet, slips and trips are seldom recognized as incidents that cause serious injury. Often, the cause of the slip, trip or fall is identified after a catastrophic outcome.

When a slip, trip or fall occurs, a person may be thought of as clumsy or inattentive; however, most slip, trip and fall incidents are preventable.

Definitions:

1. **Slip.** A loss of balance that occurs when there is too little friction between your feet and the surface on which you are walking.
2. **Trip.** A loss of balance occurring when your forward motion is interrupted by some object.
3. **Fall.** The result of losing control of your center of gravity.

Question:

Name some common causes of slips, trips and falls.

Answer:

1. Obstructions such as cords, tools, boxes or wastes
2. Wet and slippery surfaces
3. Uneven surfaces
4. Improper footgear
5. Distractions
6. In a hurry
7. Broken rungs or improper use of a ladder

Question:

What type of conditions may cause a person to fall on a stairway?

Answer:

1. Wet or slippery conditions
2. No hand rail
3. Worn treads
4. Poor stair maintenance
5. Obstructions
6. Moving too fast or skipping stairs.

Question:

List common causes of falls on level surfaces.

Answer:

1. Tripping hazards such as open file drawers
2. Poor housekeeping practices
3. Wet and slippery surfaces
4. Improper shoes for conditions
5. Loose shoestring or clothing

Question:

Identify items that may make a floor dangerous.

Answer:

1. Active housekeeping procedures such as washing or mopping a floor
2. Spilled liquids
3. Changing weather conditions
4. Poor lighting
5. Unmarked openings
6. Poor housekeeping practices

Question:

What precautions are needed when working on a ladder?

Answer:

1. Inspect the ladder prior to use
2. Set the ladder properly, extend braces and ensure the ladder is secure
3. Don't use the top step
4. Extend ladders three feet above surfaces to be accessed
5. Maintain your center of gravity within the width of the ladder

Question:

What housekeeping steps may prevent slips, trips and falls?

Answer:

1. Replace items in their proper places
2. Clean up spills and leaks promptly regardless of whether you caused them
3. Keep aisles and corridors obstacle-free
4. Block off areas being cleaned
5. Report or repair items requiring maintenance

Question:

What can you do to prevent a slip, trip or fall?

Answer:

1. Pay attention to where you are going
2. Use handrails
3. Walk, don't run
4. Wear shoes with a tread appropriate for conditions

Question:

Identify items that may cause a slip, trip or fall regarding:

1. **Floors and Walkways:**

Answer:

- a. Obstructions
- b. Items not returned to where they should be
- c. Open file drawers
- d. Boxes and material not in their proper places
- e. Cords on floors

- f. Wet or slippery conditions
- g. Uneven surfaces

2. Stairs:

Answer:

- a. Broken or worn treads
- b. Railing in poor condition
- c. Inadequate lighting

3. Ladders:

Answer:

- a. Broken rungs or steps
- b. Improper use
- c. Missing or broken spreaders or tie rods

4. Elevated surfaces:

Answer:

- a. Railings missing or not maintained
- b. Hidden hazards, such as floor openings
- c. Not using fall protection

Question:

List some factors displaying personal commitment?

Answer:

1. Know where you are going
2. Watch where you are walking
3. Move around obstructions, not over them
4. Use handrails when on stairs
5. Use the proper shoe for the anticipated hazard
6. Avoid jumping from level to level; use steps or ladders
7. Inspect your ladder prior to use
8. Use fall protection when required
9. Only rock in a rocking chair

Slips, trips and falls occur more often than we realize. Their consequences can cause disability or even a fatality. Each of us needs to keep our workplace clear of hazards that could cause a slip, trip or fall. We must be alert for potential problems and work in a manner that will prevent injuries to co-workers and ourselves.

YOU CAN LIFT SAFELY

We will never know how many people hurt their backs lifting things, because most of them are never reported. People bend over to lift something and feel a sudden or sharp pain in the back, way down below the belt. It isn't really an accident, nothing slipped or bumped him or fell on him. He just got that sharp pain.

Usually the pain isn't enough to keep you away from work, but it hurts for a long period of time and it does handicap you quite a bit.

What has happened is that a muscle was torn or pulled loose from its tendons. Not the whole muscle, just some fibers. The muscle is made up of a bunch of fibers, like a bunch of rubber bands. When a few pull loose, that's what a strain is like, and it hurts like anything.

Lifting properly could prevent most strains and hernias.

1. Set the feet firmly, placing one foot alongside the load, and the other slightly behind the load.
2. Always crouch down to what you are going to lift, keeping the back as straight as possible.
3. Set the leg muscles, hips and back ready to take the strain.
4. Get a firm grip with fingers under the load whenever possible.
5. Lift the weight with the arms to get the load off the ground; then stand up with strong leg muscles.
6. Lift gradually – avoid jerking or twisting motions.
7. Put load down by generally reversing the process.
8. Never try to lift beyond your strength. Get Help.

ALWAYS REPORT ALL ACCIDENTS

For more information, contact:

P 800-362-2041

Grinnell Mutual Reinsurance Co.
4215 Highway 146
P.O. Box 790
Grinnell, IA 50112-0790
grinnellmutual.com



Trust in Tomorrow.®

