

The Safety & Health Advisor

Summer 2005



Warehouse and Dock Safety

Warehouse and dock operations are found in nearly every manufacturing company. Safety considerations related to these areas to prevent employee injuries and accidents are just as important as safety matters in the production areas. Common causes of warehouse injuries include back injuries from lifting heavy or awkward loads and using awkward postures (e.g., excessive bending at the waist), slips and falls from slippery floors, cluttered aisles, or trips related to inadequate lighting. Personnel being struck by powered equipment like forklifts or powered pallet jacks along with incidents associated with fires caused by unauthorized smoking are some of the most serious injuries that can occur in a warehouse. This article provides some helpful tips to reduce the potential for many of the most common injury sources.

General Safety Tips Related Warehouse Layout, Lifting, and Moving

Whenever possible the warehouse should be designed so that mechanical aids such as forklifts, hoists, carts and conveyors can be used to avoid manual lifts or transfers. For jobs that require manual palletizing, consider stacking a few idle pallets on the floor to reduce bending down below knee height. Stack heights should be kept below shoulder level to avoid the risk for overexertion injuries as well. In general, minimize the amount of lifting by pre-planning your tasks!

Changes to the warehouse floor plan or storage racking slot locations of items also can have a major impact on safety and efficiency of your warehouse. New products which are selling the fastest should be stored in areas of the warehouse where they can be reached and retrieved quickly. A good rule of thumb is to place the most frequently handled boxes and products between knee and shoulder height to maximize efficiency. Heavier boxes which must be lifted should be placed on racks between waist and knee height.

Here are some tips related to proper lifting technique:

Highlights in this Issue

Warehouse and Dock Operations Safety
Atlantic Charter – Manufacturing Safety Seminar
Outdoor Safety
Driver Safety for the Incidental Fleet

Encourage workers to warm up (stretch your muscles) before lifting. Know the weight of an item that you plan to lift. Get help for heavy or bulky items. Avoid grasping areas near pinch and shear points or at the ends of long items. Keep the load close to your body and get a good grip. Face in the direction of the lift and turn your feet to avoid having to twist at the waist. Let your legs do most of the lifting, not your back. Use your feet to pivot when turning – don't twist at the waist. Plan before lifting. Anticipate distance, stairs, ramps and obstacles, and know where to set the load down. Plan for clearance to avoid getting pinched hands or fingers. A common way to avoid pinched fingers is to place large items on blocks or shims on flat surfaces.

Cart Safety

Supply employees with a cart equipped with large diameter wheels for transporting heavy boxes or objects. Carts should be provided with hand guards if they are used in narrow aisles or halls that require a lot of maneuvering in tight spaces. Employees should be instructed to push carts (versus pulling) when possible to reduce stress at the low back. Lubricate wheel bearings and other moving parts and check the wheels for debris as part of your preventive maintenance program. Finally, avoid overloading the cart or piling materials too high that can obstruct your view and could cause the cart to tip on uneven floors.

Powered Industrial Truck Safety Issues

Injuries related to unsafe forklift operations are among the most serious and costly of all warehouse and dock accidents. Struck by incidents involving pedestrians and forklifts and falling loads are almost always very serious and sometimes fatal. Therefore, only operators who are properly trained and certified should be allowed to operate the forklift in the warehouse or on the dock. Forklift-related accidents can be prevented by careful facilities design to designate pedestrian aisles and walk areas and designing intersections which allow good visibility (good lines of sight for the operator and pedestrians) and adequate lighting. Enforcement of safe operating procedures such as forklift traffic speed limits must also be continuously stressed.

The Safety & Health Advisor

Summer 2005

OSHA regulations require the use of wheel chocking or other vehicle-restraining device when loading and unloading trucks and trailers. This can be accomplished by use of rubber wheel chocks or vehicle restraint devices (a more expensive yet "safer" alternative) such as the type that holds the trailer ICC bumper to the dock. Chocking is the responsibility of the driver. However, the forklift operator should also visually verify the trailer is chocked before driving into the unit.

Adequate lighting on the dock and inside trailers that are loaded and unloaded is another important factor. Make sure lift trucks used to load/unload trailers are equipped with spotlights. Dock-mounted lights should also be used to supplement the lift truck lights or when manually loading/unloading trailers with pallet jacks for handcars.

Fire and Life Safety Considerations

Fire safety must be a top priority in the warehouse and dock to protect workers and the assets of the building and contents. Trash accumulation and combustible debris can be a potential fire source and also create a hindrance during a building evacuation. Employees should be reminded to never store pallets or any other items in exit paths or in front of designated exit doors that might hinder egress.

Finally, dock areas frequently can become an extension to the smoking area. Company policies requiring smoking outside in a "designated area" away from the building need to be enforced. Safe smoking receptacles in this area need to be provided and cleaned out regularly. As a reminder, The Massachusetts Smoke-Free Workplace Law prohibits smoking in workplaces in order to protect employees and the public from secondhand smoke. Any employer who allows smoking in an area or establishment that is regulated by this law is subject to a penalty ranging up to \$300 for each violation and some local municipalities may have regulations with even stricter penalties. A smoker who violates the smoke-free workplace law can also receive a \$100 civil fine.

Housekeeping

Warehouse and dock workers need to constantly be on the lookout for trash and other debris that could cause a slip, trip, or fall. Employees should be instructed to throw away excess shrink wrap or cardboard along with broken pallet pieces as they work. Many companies also designate a period of time at the end of each day to thoroughly clean and sweep the warehouse to remove clutter. Grease, oil, or water on

the floor can be just as dangerous. Therefore, cleaning procedures for these slipping hazards needs to be established and enforced too.

Warehouse and Dock Safety Summary

Getting your finished goods properly inventoried and shipped from the dock is essential to the success of every manufacturer. Ensuring that this area of your operation is safe is equally important. Remember that workers in the warehouse need to be continually reminded to follow correct work methods such as manual lifting to reduce the risk for accidents. Also, make sure that new hires, special summer help, and temporary employees added this summer receive formal orientation so that they understand that only authorized persons are allowed to operate powered equipment in the warehouse. Other policies such as housekeeping and smoking rules need to be stressed also. Correcting the employee's unsafe behavior the very first time you see any safety rule violated will go a long way towards establishing good work habits that will stay with them for years to come.

First Annual Atlantic Charter Safety Seminar a Success!

On March 30, 2005, Atlantic Charter held its first annual Safety and Health Seminar at the Marriott Hotel in Newton. Forty (40) attendees from manufacturing companies throughout the state attended the seminar. Topics covered were Safety & Health Programs, Supervisors' Safety Responsibilities, OSHA Inspections, and Maximizing the Effectiveness of Your Safety Committee.

Attendees raised a number of thought-provoking questions and shared examples of how they have successfully implemented program elements in their facilities.

The seminar also provided attendees with an opportunity to network with their peers. Each attendee was provided with a binder containing presentation slide handouts and reference materials. There are a limited number of additional copies of this binder available to our manufacturing insureds. Please contact your Safety and Health Consultant if you are interested in obtaining a copy.

We plan to sponsor a Safety & Health seminar next year for our manufacturing insureds. Consideration is also being given to forming focus groups for other industries, including visiting nurse associations. Please feel free to share any presentation topic ideas with your Safety and Health Consultant.

The Safety & Health Advisor

Summer 2005

Outdoor/Landscaping Safety

While safety in the outdoor environment is important year-round, it is increasingly vital when the warm weather approaches as the number and types of potential hazards increase with the summer season. Whether performing outdoor work for employment or around your own home there are certain precautions and work practices that should be used to reduce the chance of injury. The intent of this article is to highlight some of the potential hazards faced in the outdoor environment and the possible controls that can be utilized for injury prevention.

The first is to always inspect the work site for potential hazards before beginning work activities.

The two (2) most common precautions are to wear **sunscreen** (at least SPF 15) to avoid sunburns and potential longer-term health risks and to use **insect repellent** to reduce the risk of mosquito (i.e. West Nile virus, Eastern Equine Encephalitis) or tick bites (i.e. Lyme disease) and potential disease. Other insects or animals may be of concern depending on your specific work activity or location (i.e. stinging insects, rabid animals).

Another environmentally related risk is extreme body heat (i.e. heat stress, heat exhaustion) in the summer from a combination of high air temperature and work activity when the body can become quickly dehydrated. Taking breaks as needed in a cool or shaded environment and drinking plenty of fluids designed to replace the body's electrolytes can be beneficial. OSHA provides a Heat Stress Card in both English and Spanish versions at the following link:
<http://www.osha.gov/Publications/JSHQ/summer2002/toolbox.htm>

Moving from some general risks to those that are more specific the first item to be addressed is the use of **chemicals** (i.e. pesticides, cleaning agents, lubricants). **READ THE LABEL.** This is the easiest way to help avoid injury, but is often overlooked. The label (or Material Safety Data Sheet/MSDS if available) should provide enough information on how the product should be properly handled and the precautions necessary to prevent injury including application methods and personal protective equipment (PPE) needs. Another factor to consider when applying chemicals are the weather conditions (i.e. humidity, wind). Hand protection (i.e. proper gloves for the specific chemical); eye/face protection (i.e. safety glasses, goggles or face shield) and sometimes respiratory protection (i.e. dust mask or respirator) are required.

If operating power tools or equipment such as lawn mowers, string trimmers, rototillers, chainsaws, leaf blowers or vacuums, chippers, etc... you should also heed the warning labels on the equipment and the instructions provided by the equipment manufacturer on proper operation and PPE. **NEVER** reach into operating equipment to clear jams or bypass safeguards. Follow safety procedures or have a qualified person perform the work. In addition all tools (hand or power) and equipment should be inspected prior to use (i.e. safeguards in place, no damage, adjusted properly, sharp) and receive proper maintenance. In addition to wearing proper eye protection when using some of the above equipment, also consider the use of hearing protectors due to high noise levels that can be generated, particularly if you are operating equipment for a good portion of the day. Proper footwear can reduce potential injuries from equipment contact and also lessen the possibility of slip and fall injuries.

If you operate motor vehicles or ride-on equipment please wear the seatbelt provided by the manufacturer, especially on equipment that provides roll-over protection systems (ROPS) such as a certain ride-on mowers being operated on a sloped surface. Also, understand manufacturer's warnings on the degree of slope that equipment can be safely operated. An incident involving training of employees on ride-on equipment, which resulted in a fatality, can be reviewed at:

www.cdc.gov/niosh/face/stateface/ma/01ma020.html.

Performing elevated work, whether it is on an elevated platform, ladder, and scaffold or in a tree, requires that you utilize the proper work methods including fall protection equipment if necessary. Ladders and scaffolds should be inspected prior to use, setup properly and not used if damaged or in locations where stability is in question. If doing tree work or using fall protection make sure that ropes and harnesses are inspected prior to use, are appropriate for the particular task and that you understand how to properly use the equipment.

The use of personal protective equipment (**PPE**) is important in just about all types of outdoor work activity where engineering controls have not been able to eliminate the hazard(s). Some PPE requirements have already been mentioned. PPE includes protection for eye/face, hands, feet, head and other body parts depending on work activity as well as hearing and respiratory protection. Not only should PPE be provided, but employees should be trained on its proper use, care, maintenance and limitations.

The Safety & Health Advisor

Summer 2005

Eye/Face: Wear safety glasses when there is a potential for flying or impact hazards possibly in conjunction with a face shield. If the work activity generates dust or chemical vapors/mists then goggles should be worn to provide a better seal. Eye protection must meet ANSI Z87 standards to be acceptable, which should be stamped or stenciled on the frames. Protection against ultraviolet rays of the sun should be considered, so glasses having UVA and UVB coatings are preferable for outdoor work.

Hand: Wear gloves when working outdoor to prevent punctures, lacerations, rashes (i.e. poison ivy), chemical exposures (even pouring gasoline) or reducing vibration impacts. Gloves should be appropriate for the work being performed. If being used to prevent cuts or rashes, sturdy cotton or leather gloves would probably be adequate. If handling chemicals, however, it may be important to wear specific gloves as recommended by the label or MSDS such as nitrile, butyl, neoprene or other synthetic material resistant to the specific chemicals being used. Padded gloves should be considered when doing work that causes excessive vibration.

Foot: Sturdy, over-the-ankle footwear with a good tread (i.e. work boots) is typically best for outdoor work to help reduce slips, falls and ankle sprains. It is important that laces be properly tied to prevent a possible trip hazard. If working with heavy objects that may injure the foot, safety toes should be considered (either steel or polycarbonate shell).

Head: If working in an environment with overhead hazards such as scaffold work, tree work or other work where there is a potential for materials or objects to fall then head protection should be worn. The same can be said when working in areas with low overhead clearances. Typically this would be a hard hat with a good suspension system. Do not confuse hard hats with bump caps. Bump caps might be appropriate to protect against low overhead clearances, but if any materials drop then hard hats should be used (they are usually good for a five (5) year period, with date stamped on inside). Hard hats should always be inspected for damage prior to use to ensure integrity of the shell.

Hearing: Outdoor power equipment normally generates noise levels above eighty-five (85) decibels, which is the recommended limit for hearing protection. It is a good practice to wear hearing protectors such as ear plugs or ear muffs anytime noise generating equipment is used. As we age, hearing declines normally, so why accelerate that process? The OSHA website provides reference information at,

<http://www.osha.gov/SLTC/constructionnoise/index.html>

Respiratory: Those persons whose work activities expose them to significant amounts of dust or chemical mists or vapors should probably be using respiratory protection. Whether wearing a dust mask while using leaf blowers or a cartridge respirator for other applications, it is important that employees understand the exposures and what type of respiratory protection is recommended or required. If using a "respirator", employees should have a medical qualification exam in addition to proper training.

Other: There may be times when other body protection is required, such as during chemical spray applications. It may be necessary to wear coveralls, Tyvek® suits or other garments to prevent exposures.

The use of proper work practices, adequate training, well maintained equipment and appropriate PPE can go a long way to preventing injuries and allow you to enjoy your summer.

Driver Safety for the Incidental Fleet - How to Protect Your Employees.

Everyday employees get behind the wheel of their vehicle, never thinking an accident may be seconds away. According to the most recent data from the U.S. Department of Transportation, National Highway Traffic Safety Administration:

- Motor vehicle accidents (MVAs) are the leading cause of death for people between 3 and 33 years old.
- MVAs are the leading cause of work-related deaths.
- In 2002, 43,005 people died as a result of a motor vehicle accident
- In 2002, an average of 115 people died each day in a motor vehicle accident- that is one every 13 minutes!

Regardless of the size of your company fleet or the nature of its operations, a good safety record is the direct result of well-planned and well-executed operational controls. Work-related accidents can cause unnecessary expense to organizations in terms of repair costs, reduced productivity and death or injury of workers. The following article is geared towards companies with incidental fleets and contains tips on what these fleets can do to prevent MVAs.

The Safety & Health Advisor

Summer 2005

What can we do?

Implement a formal vehicle safety program

Developing a vehicle safety program demonstrates that your company takes a leadership position relative to the safe operation of its fleet. Implementing a program will help prevent accidents, work to correct safety problems and ensures compliance with regulations, all of which can help lower insurance premium costs and more importantly prevent an accident. A study done by the National Safety Council determined that companies without a formal fleet safety program average over three (3) times the accidents per vehicle annually compared to companies with a formal program.

Hire safe drivers

Putting a poor driver behind the wheel of a vehicle may be one of the costliest mistakes you can make. The majority of preventable motor vehicle collisions are directly related to the performance of the driver. It is therefore extremely important for a company to pay careful attention to new driver selection and adequate monitoring procedures for existing drivers. An applicant's driving history must be considered as part of the hiring process.

Documented common evaluation criteria should be established and applied uniformly to all drivers.

Essential information for applicants driving record

Each driver should complete an application containing the following information:

- Experience by vehicle type (i.e., auto, van, truck, etc.)
- Driver license number, including restrictions
- Three-year history of moving violations
- Three-year history of MVAs

Prospective employees should be questioned on their past driving experience. A motor vehicle record check (MVR) should be ordered to verify this information. Don't just rely on what the employee tells you on his/her application - look for discrepancies. Unqualified applicants can be eliminated early in the selection process if the application contains a carefully worded release which must be signed and dated by the applicant.

Example: Before each applicant and/or employee is initially assigned to operate a company vehicle or use their own vehicle on company business, they will be expected to provide a drivers history listing any prior accidents and/or moving violations. This document

should be correlated with the state MVR report to verify the accuracy of data received.

All current and/or prospective employees who will drive a company vehicle or use their own vehicle on company business must have an acceptable driving record on file. Those lacking an acceptable record should not be hired and/or restricted from driving on company-related business. Your company may decide that more than three (3) moving violations in the past three years are unacceptable. Also you may decide not to hire someone who has been convicted of any alcohol-related or drug-related driving offenses during the past five (5) years.

Employee Training

Initial and continual training practices play a critical part in any driver safety program. Such programs sharpen the skills and provide the knowledge necessary to maintain safe and efficient driving practices.

A common saying is "the best offense is a good defense"—such is also the case with driving. Defend yourself from hazards on the road before they cross your path. Being a defensive driver means not only taking responsibility for your actions but also keeping an eye on "the other guy".

The Massachusetts Safety Council (MSC) in Braintree holds Defensive Driving classes. For further information, visit MSC's web site at www.masafetycouncil.org or contact Arthur Moriarty, President, or his Assistant at 781-356-1633.

Wear your seat belt

Everyone should buckle up as soon as they get into a car, truck, or other motor vehicle. Why?

- According to the National Transportation Safety Board, from 1994 through 2003, almost 59 percent of people who died in motor vehicle crashes nationwide were not wearing seat belts.
- 29 percent of unrestrained occupants are ejected.
- When totally ejected, 74 percent of occupants died as a result of the ejection.
- In 2003, more than 6,000 lives, and almost \$6 billion, could have been saved if all drivers and passengers had used their seat belts.
- When used properly, seat belts reduce the risk of fatal injury to front seat passenger vehicle occupants by 45 percent and rear seat passenger vehicle occupants by 44 percent. From 1975 to 2003, seat belt use has saved almost 189,000 lives nationwide.

The Safety & Health Advisor

Summer 2005

Seat belts are the most effective means of reducing serious injuries and fatalities and are estimated to save more than 11,000 lives each year. For more information, visit www.buckleupamerica.org.

Maintain your vehicles

Driver safety begins with safe vehicles. Routine inspections by the driver should be conducted regularly. Frequency can vary from weekly (for service vehicles) to semi-annually (for passenger vehicles) depending on hours of operation, mileage, etc. An inspection checklist should be broad enough in scope to cover basic vehicular equipment, such as lights, turn signals, tire condition, body damage, etc.

Vehicles should be kept clean and minor scrapes, dents and other vehicle wear and tear should be promptly repaired. If your vehicles look their best, your employees will have a greater sense of pride in operating them safely.

Regular preventative maintenance, whether completed in-house or by a licensed automobile service shop, is crucial.

Follow up on any incidents

MVAs do happen, despite our best efforts at prevention. When a collision occurs, we should take the opportunity to learn from them.

Management should review all vehicle collisions and near misses not only with the involved driver, but also with all employees. Review the circumstances that led to the collision, and discuss ways the incident could have been avoided or minimized. Invite feedback from other employees. They need to be part of the solution.

Remember the following to help control driver incidents

- Implement a fleet safety program
- Check MVRs pre-hire and on an annual basis; establish criteria for what's acceptable
- Maintain current copies of driver licenses
- Set criteria for acceptable driving
- Be a Defensive Driver
- Wear your seat belt!

For additional information:

The Bureau of Transportation Statistics at [http://www.bts.gov/](http://www.bts.gov) gives statistics on traffic accidents.

The National Safety Council (NSC) seeks to improve safety on the road, in the workplace, and at home. Go to <http://nsc.org/index.htm> for tips you can use to drive safely and avoid auto insurance claims.

The National Highway Traffic Safety Administration (NHTSA), a division of the U.S. Department of Transportation, is the safety authority on auto safety issues and regulations. Check out <http://www.nhtsa.gov> for information about accident statistics, driving safety tips, and vehicle crash test ratings.

The Insurance Institute for Highway Safety at www.highwaysafety.org is a great place to get information about your vehicle's crash test performance, since crash tests are good indicators of how your vehicle will perform in an accident.

If you're looking for additional assistance in setting up your ergonomics or safety and health program, please contact Neal Freedman, John Cotnam, Mark Hickox, or Margie Lobaton from Atlantic Charter's Safety and Health Department at (617) 488-6500.