

Material Handling and Storage

The (Enter Company Name Here) policy will establish safety procedures for all employees in the safe material handling and storage operations.

Requirements

Storage

The following general rules apply to all storage and handling of materials.

1. Safe floor loads shall not be exceeded. Storage racks shall not be loaded in excess of their rated capacity.
2. Aisles, corners, posts, etc., shall be clearly marked and maintained clear of obstruction.
3. Housekeeping – Storage areas shall be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage. Vegetation control shall be exercised when necessary.
4. Smoking shall be strictly prohibited except in locations prominently designated as smoking areas.
5. Secure storage – storage of material shall not create a hazard. Bags, containers, etc., stored on tiers shall be stacked, blocked, interlocked and limited to height so that they are stable and secure against sliding or collapse.
6. Clearance between top of stored material and fire suppression equipment or electrical fixtures shall be not less than 18 inches. (Storage higher than 15 feet requires clearance of 36 inches.)
7. Any commodities which could be hazardous in combination with each other shall be stored so that they cannot come in contact with each other.
8. Cylindrical objects shall be secured or blocked to prevent rolling.
9. Material shall not be stored on top of cabinets, lockers or other unassigned areas.
10. Material containing sharp protrusions shall be stored so it shall not constitute a personnel hazard. If this is impractical, a protective barrier shall be erected.
11. Loaded cartons shall be stored on platforms and protected from moisture, collapsing and possible water damage.
12. Material shall be stored adjacent to aisles and in a manner such that it shall be readily accessible and can be safely removed.
13. Fire aisles, access to stairways and fire equipment shall be kept clear.
14. Heavier objects shall be stored as low as practical.
15. Approved ladders, platforms or other equipment shall be used as necessary for storing materials at elevations above the waistline.

Manual Lifting Hazards and General Requirements

The following are requirements for manual lifting:

1. Manual handling is relatively safe if proper lifting and carrying positions are used. However, disregard of accepted safe practices can result in serious injuries, often causing permanent disability. Hernias, back strains, crushed feet and hands, broken bones, and lacerations are the more common results of poor manual handling practices.
2. Factors that affect manual lifting include the weight of the object, the shape of the object, the size of the object, and the location of the object.
3. Employees are expected to evaluate the hazards involved, including their personal weight lifting abilities, and apply the proper lifting technique to safely lift the object.
4. Individuals who are restricted in lifting for medical reasons shall have a medical recommendation available. Management is responsible for being aware of any limitation placed on their personnel.
5. Additional personnel may be required if the object is awkward, or too heavy for one person to easily lift and carry.
6. If safe manual lifting is not possible, then lifting devices (i.e., forklifts, cranes, or other lifting devices) shall be used.
7. Wearing of rings, jewelry, and loose clothing during handling operations is extremely hazardous, and these items should, if possible, be removed before starting the task.
8. The route over which the load is to be carried shall be clear of obstruction and spillage. The carrier shall make certain he/she has an unobstructed view of the direction in which he/she is moving.
9. Never try to lift beyond your strength, think before you lift, and request assistance if needed. Inspect the load to decide how it should be grasped. Determine how to avoid sharp edges, pinch points, slivers, slippery surfaces, and other things, which might cause injury. Leather gloves shall be worn when handling sharp or rough objects.
10. Face directly towards the object to be lifted.
11. Move as closely as possible to the object.
12. Place feet securely, left foot center behind load and right foot to the right side of the load, or vice versa.
13. Bend at the knees to lower yourself.
14. Grasp underneath the object or by hand hold, keeping object as close to body as possible.
15. Keep back as straight and upright as possible.
16. Lift object by slowly straightening legs only.
17. Do not twist the body and lift at the same time.
18. If a heavy load is to be placed on a bench, place it on the edge to make the bench take part of the load and then push forward with the arms or, if necessary, with part of the body in a forward motion.
19. In placing load on the floor from waist-high carrying position, knees should be bent, with back straight, and load on the floor, lower it onto one corner or edge, or preferably onto blocks previously positioned to receive the load, so as not to pinch fingers under the load.
20. When two or more people are carrying a load, they should use oral signals to coordinate their movements. Before starting to carry any material together, each should decide on appropriate emergency signal to be given if either grasp should slip or if load shall be released suddenly.

21. In carrying long objects, make certain that you shall not strike other persons or objects with the load. It is preferable to have a person on each end of the load.
22. Although experts disagree on the worth of back supports, two opinions remain constant. All agree wearing a back support improperly could actually lead to injury, and that a back support will not allow an employee to lift more weight than he/she could normally lift without the use of the support. Employees shall not wear a back support unless they read and follow the instructions from the manufacturer to ensure the support is worn properly. If employees are issued a back support, they should wear it during manual handling.

Mechanical Handling General Requirements

The following are requirements for mechanical handling:

1. Mechanical handling involves the use of many different types of lifting equipment and special purpose vehicles. Mechanical handling equipment is intended to make the job easier and reduce the hazards of manual material handling. However, unsafe conditions and/or use of equipment could increase the danger of damaging materials and causing serious injury to personnel.
2. Each operator shall be instructed in the proper use of the equipment. The instruction shall include safe operation, inspection, preventive maintenance, and material handling practices. Only authorized and properly trained personnel shall be allowed to operate mechanical handling equipment.
3. Equipment shall be taken out of service for any of the following safety defects:
 - o Malfunctioning brakes
 - o Steering mechanism problems
 - o Control mechanism problems
 - o Warning device problems
 - o Inoperative lights
 - o Lifting mechanism problems
 - o Guard or tilt mechanism problems
 - o Fuel leaks
 - o Worn or damaged tires
 - o Damaged exhaust system
4. Personnel shall be prohibited from riding on all mechanical handling vehicles except where seats are provided.
5. When the vehicle is loaded, the materials loaded shall not obstruct the view of the operator.
6. Load capacity shall not be exceeded. Material shall not be overstocked onto material handling equipment. Secure materials in a manner to prevent sliding, tipping, or falling during transportation and ensure visibility is not impaired. If visibility is impaired, the operator shall enlist an observer to assist in all cases of restricted clearance or obscured visibility. The driver/operator shall be responsible for directing the team effort and ensuring that safe procedures are implemented.

7. Equipment designed to be pushed shall not be pulled, except for maneuvering purposes.
8. Equipment designed to be pulled shall be limited to travel on horizontal surfaces with the operator facing and moving in the direction of travel.
9. Operation of a vehicle shall be in a manner that provides complete control at all times. When parked, the power shall be turned off and brake set. High rates of acceleration and deceleration shall be avoided.
10. Lifting of personnel with a forklift shall only be performed on an approved safety pallet. The pallet shall:
 - o Have a 4-inch toe board.
 - o Have expanded metal background to protect personnel from moving parts of forklift, (minimum 5 feet).
 - o Have mitered corners.
 - o Have handrail on back guard.
 - o Have safety chains or rails with top chain or rail 42 inches from the platform and a standard midrail chain or rail, (enclosing all three open sides).
 - o Have chains for securing pallet to fork truck.
 - o Have a checker plate flooring to prevent slippage of pallet.
 - o Have a sign on the pallet with instructions prohibiting the movement of the forklift with personnel on the safety pallet.
11. Only approved and load tested rigging equipment (slings, shackles, rings, chains, etc.) shall be used to lift loads. Loads shall only be prepared and lifted by certified personnel.
12. An operator shall be assigned to each piece of equipment being used for each task.
13. An additional person not operating a piece of equipment shall be assigned when two or more pieces of equipment are going to be used for a specific task. One of the individuals shall be assigned as task lead for the project.
14. A pre-task briefing shall be conducted and documented for all operations using mechanical handling equipment. For tasks involving more than one person, the identified task leader shall conduct the pre-task briefing.
15. All crane and hoist operations that require a complex configuration lift shall have approved written procedures and checklists.
16. Forklifts shall not be used in areas if the movement of the forklift increases the hazard.

Material Handling with Powered Industrial Trucks (Forklifts)

OSHA uses the phrase "powered industrial truck" (commonly called a forklift) to refer to a whole range of vehicles powered by electric motors or internal combustion engines that are used to move supplies and materials.

Trucks

The following requirements apply to trucks:

1. The brakes of highway trucks shall be set and wheel chocks placed under the rear wheels to prevent the trucks from rolling while they are boarded

- with powered industrial trucks.
2. Fixed jacks shall be necessary to support a semi-trailer and prevent up-ending during loading or unloading operations.
 3. Vehicles shall be parked with the emergency brake engaged and with the shift lever in "Park" for automatics and in reverse for "stick-shift" vehicles.
 4. The areas immediately behind and in front of vehicles shall be inspected before entering and starting trucks. When backing out of tight spaces, the use of a "spotter" is encouraged.

Low-Speed Vehicles (0-40 mph)

A low-speed vehicle may be operated on streets where the posted speed limit is 35 miles per hour or less. This does not prohibit a low speed vehicle from crossing a road or street at an intersection where the road or street has posted speed limit of more than 35 miles per hour.

Low-speed vehicles must be equipped with headlights, stop lights, turn signal lights, tail lights, reflex reflectors, parking brakes, rearview mirrors, windshields, seat belts, and vehicle identification numbers.

Skid Steer Loaders (Bobcats)

The following are requirements for skid steer loaders:

1. Skid steer loaders are an extremely effective tool for multiple types of work. However, they are also potentially very dangerous because of their extreme maneuverability and the ease with which they can be turned over.
2. The maneuverability comes from the small wheel base and the fact that when the units are unloaded, about 70 percent of the weight is on the rear axle, with 30 percent on the front. With most of the load on the rear axles, the machine easily pivots or turns on the rear wheels. However, the situation is reversed with a load in the bucket when the weight distribution is reversed and the pivot point becomes the front wheels.
3. The maximum operating capacity of a bobcat loader shall not exceed 50 percent of the tipping load.
4. Safety guards and devices consist of combination of the rollover protection of the cab, the falling object protective structure above the operator, the seat bar and the seat belt.
5. Modifications shall not be made to any portion of the rollover protection or protective structure above the operator without the written permission and concurrence of the manufacturer.
6. Operator shall make sure the seat bar is properly in place and the seatbelt is firmly secured before operating the bobcat.
7. Personnel shall not operate a skid steer loader, (bobcat), unless they have been trained and certified.

Other Portable Tools (Lifting Stands, Jacks, etc.)

The following are requirements for other portable tools:

1. The operator shall make sure that the jack used has a rating sufficient to lift and sustain the load.
2. The rated load shall be legibly and permanently marked in a prominent location on the jack and casting, stamping, or other suitable means.
3. In the absence of a firm foundation, the base of the jack shall be blocked. If there is a possibility of slippage of the cap, a block shall be placed in between the cap and the load.
4. The operator shall watch the stop indicator, which shall be kept clean, in order to determine the limit of travel. The indicator limit shall not be overrun.
5. After the load has been raised, it shall be cribbed, blocked, or otherwise secured at once.
6. All jacks will be thoroughly inspected at times, which depend upon the service conditions. Inspections shall be not less frequent than the following:
 - o Prior to each use for signs of damage, deformation, or excessive rust.
 - o For jacks sent out of shop for special work, when sent out and when returned.
 - o For a jack subjected to abnormal load or shock, immediately after removal of the load.
 - o Jacks that are out of order shall be tagged accordingly, and shall not be used until repairs are made.

Roles and Responsibilities

Management

1. Ensure compliance in their functional areas with the requirements in this procedure.
2. Ensure their personnel are trained and qualified to perform the task being assigned to them.

Employees

1. Comply with the requirements in this procedure.
2. Assist Management in the performance of their responsibilities.
3. Review compliance with this procedure as part of annual safety, health, and facility assessments.

Definitions

Common Areas - The portion of a facility that is not part of a specific work area, (i.e. rest rooms, hallways, etc.).

Employee - Includes all permanent & temporary employees and Sub-contractor

employees.

Free rigging - The direct attachment to or placement of rigging equipment onto a vehicle not specifically designed by the manufacturer as lifting equipment or without the use of an approved lifting attachment.

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