





LSU University Safety Manual  
Section IV, Part E –Material Handling

2. Because of their shape, smooth surface, and weight, cylinders are difficult to carry by hand. Cylinders weighing more than 40 pounds total should be transported on a hand or motorized truck, suitably secured to keep them from falling.
- g. Items to remember when lifting by hand:
    - i. Avoid twisting while turning with a load.
    - ii. Watch for narrow places when moving materials.
    - iii.

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- v. When entering elevators or tight areas, enter with the load forward. Make sure load is bound to truck.

3. Requirements for Heavy Construction Equipment

(Rollers, Compactors, Front-end Loaders, Bulldozers, Trucks, etc.)

- a. All vehicles of these types shall have a suitable horn available which is tested before the vehicle is used.
- b. Operators shall wear seat belts at all times when machinery is in operation.
- c. All controls (brakes, steering, etc.) shall be tested each shift before the vehicle is used.
- d. No riders shall be allowed on machines unless the machine is designed to carry riders.
- e. Blades, buckets, and shovels on earth-moving machines shall be lowered to the ground when the equipment is parked or unattended.
- f. All earth-moving equipment shall have a roll-over protection structure (ROPS) and seat belts.
- g. Trucks that are loaded by a crane, power shovel, loader, or similar equipment shall have a cab shield and/or canopy strong enough to protect the operator from shifting or falling materials. Operators shall be out of the vehicles while they are being loaded. Brakes shall be set.
- h. All trucks, excluding pickup trucks and earth-moving equipment, shall have an audible warning device that sounds automatically when they are backing up. The sound shall be able to be heard at least 200' away.
- i. Smoking during vehicle refueling is prohibited.
- j. All vehicles shall be operated in a safe manner. Earth-moving equipment shall not exceed 15 mph.
- k. All vehicles shall be inspected before each use and thoroughly on a regular basis.

4. Fork Trucks

Fork trucks are used to carry, push, pull, lift, stack, and tier materials.

- a. Only trained and authorized operators shall be permitted to operate a powered industrial truck. Training shall include:
  - i. Lecture
  - ii. Instructor led demonstration field activities
  - iii. Workplace evaluation
- b. Guarding
  - i. Hazardous moving parts such as chain and sprocket drives and exposed gears shall be guarded to protect the operator in his normal operating position.
  - ii. All fork trucks shall have an overhead guard in accordance with ANSI B 56.1.
  - iii. Exposed tires shall have guards that will stop particles from being thrown at the operator.
  - iv. Hydraulically-driven lifting systems shall have a relief valve installed and suitable stops shall be provided to prevent travel over of the carriage.

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- v. A load backrest extension shall always be used when the type of load presents a hazard to the operator. The top of a load shall not exceed the height of the backrest.
- c. Loading
- i. If the material being handled is obstructing the view, the operator is required to travel backwards. The operator shall face the direction of travel at all times.
  - ii. Only loads within the rated capacity of the truck shall be handled. No counter weights shall be allowed. A nameplate showing the weight of the truck and its rated capacity shall be located in plain view on the truck.
  - iii. Backwards tilt shall be used to stabilize the load.
  - iv. Loads shall be checked for overloading and for loose material before making the lift.
  - v. Extreme care shall be taken when handling long items, i.e., bar stock and lumber.
  - vi. The load shall never be driven in an upward position, nor raised or lowered while moving.
  - vii. Forks shall be locked to the carriage, and the fork extension designed so as



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- b. Hoists shall be inspected before each use. Regularly scheduled detailed inspections shall pay special attention to load hooks, ropes, brakes, limit switches, wear damage, and railstops. During inspection and/or repair, the power shall be disconnected and potential energy sources depleted. A warning sign stating such shall be posted. See Lock out / Tag out Program.
6. Insulated Aerial Baskets  
See Electrical Safety for additional guidance.
  - a. Aerial baskets shall be of the proper design and construction for the intended work.
  - b. The design limits of the equipment must be thoroughly understood and the baskets operated within the limits of their capabilities.
  - c. Daily inspections shall be performed by the operator to uncover defects before they become serious in nature. Annual comprehensive inspection and dielectric testing shall be performed on an annual basis.
  - d. All maintenance, both preventive and corrective, shall be performed by qualified personnel.
  - e. Operation of aerial baskets shall be trained on and familiar with the specific type of aerial basket being operated.
  - f. Adequate clearances shall be observed. The ability to judge distances is essential. Sufficient rubber protective equipment is as necessary in working from aerial baskets as in working from a pole.
  - g. Pre-job briefing (tail board conference) shall be conducted before jobs involving aerial baskets.
7. Hand Signals  
Basic hand signals should be used by all operators and riggers of cranes, hoists, boom trucks, aerial baskets, etc., shall use.  
NOTE: See Appendix for hand signals.
8. Slings
  - a.

