

Worksite: _____ Instructor: _____ Date/Time: _____

Topic C346: Boom Truck Hoist Safety

Introduction: Trucks with mounted hoists, derricks, or cranes are widely referred to as boom trucks. A "boom truck" consists of a rotating hoisting mechanism with power plant, operating machinery, and boom, all mounted on an automotive truck. Its function is to hoist and swing loads at various angles and degrees of arc. Safety guidelines for boom trucks are as follows:

- The employer must ensure that persons who operate boom trucks are properly trained in the safe operation of the truck and hoisting equipment.
- The vehicle that the side boom is mounted on is subject to all vehicle safety regulations.
- Where manufacturer's specifications are not available, the limitations assigned to the equipment must be based on the determinations of a qualified engineer competent in this field. These limitations must be documented and recorded.
- Rated load capacities, recommended operating speeds, and special hazard warnings or instruction, must be conspicuously posted on all equipment. Instructions or warnings must be visible to operators while they are at their control stations.
- Hand signals for hoist and derrick operators must be American National Standard and posted at the operator's station.
- Do not exceed the rated capacity for the boom hoist.
- Never use the boom hoist to lift personnel.
- Attachments used with hoists must not exceed the capacity, rating, or scope recommended by the manufacturer.
- The truck must be as level as possible when using the hoist, especially on side loads. The outriggers should be used to level the truck.
- The outriggers should always be fully deployed on a firm base when lifting a load to the side of the truck. If necessary, place pads under the outriggers to disperse weight on soft ground.
- Ensure that the boom is clear of all personnel and equipment before extending or unfolding the boom. Always check for overhead power lines or obstructions before moving the boom.
- Ensure that all personnel are clear before swinging the boom.
- Operators must be aware of the changes in elevation of the load that articulating the boom will cause.
- Never allow personnel to stand, walk, or work under any hoisted load.
- The employer must designate a competent person to inspect all machinery and equipment prior to, and during use, to ensure that it is in safe operating condition.
- Belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating, or moving parts/equipment must be guarded.
- Any deficiencies in equipment must be repaired and defective parts replaced prior to use.
- A thorough annual inspection of the hoisting machinery must be made by a competent person, or by a government or private agency recognized by the U.S. Department of Labor.
- The employer must maintain a record of the dates and results of inspections for each hoisting machine and piece of equipment. Boom trucks equipped with cable winches have specific requirements regulating the cable (wire rope) used.
- Wire rope used on boom trucks must be taken out of service when any of the following conditions exist:
 - In running ropes, six randomly broken wires in one cable, or three broken wires in one strand.
 - Diameter of outside wires reduced by one-third.
 - Kinking, crushing, bird caging, or any other damage resulting in distortion of the rope structure.
 - Evidence of heat damage from any cause.
 - In standing ropes - more than two broken wires in one cable in the sections beyond the end connections, or
 - more than one broken wire at an end connection.
- No modifications that affect the capacity or safe operation of the equipment should be made without the manufacturer's written approval. If modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals, must be changed accordingly. In no case may the safety of the equipment be reduced.

Conclusion: Employees working with boom trucks must be familiar with the equipment, its operation and the safety procedures necessary to avoid accident or injury.

Employee Attendance: (Names or signatures of personnel who are attending this meeting)

These guidelines do not supersede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations