

Training Module: Material Handling Devices

Objective: To be able to use tools and equipment effectively and safely to move farm materials.

Trainer's Note: Use mechanical devices when a task cannot be completed by hand. Using these devices can simplify the task, but may increase the risk of danger. Ask experienced workers to demonstrate the proper use of the mechanical devices used in the workplace. All new employees should practice using them. Mechanical devices can be a great help to move machinery parts as well as potted plants and produce.

Background

Hand Trucks:

- Wheelbarrows, dolly trucks and two-wheeled hand trucks are all hand trucks.
- Two-wheeled hand trucks can lift and transport heavy, bulky objects short distances.
- Work gloves and safety shoes should be worn.
- Hand trucks should be equipped with canvas, leather or rubber knuckle guards to help prevent hand injuries.
- When loading, the heavy objects should be below the lighter ones, and the load kept as low as possible.
- The hand truck should not be overloaded, and the load should not obstruct your view.
- Use proper lifting techniques (Refer to Preventing Lifting and Overexertion Injuries module) when lifting a load.
- The operator should push and balance the truck always walking forward.
- The truck should not be held in place with your foot. Two-wheeled hand trucks should be equipped with brakes.



Conveyors:

- Generally, conveyors used in industry are roller, belt, screw, bucket, chain, overhead trolley, portable, mobile, tow, or assembly types.
- Moving parts should be guarded with wire mesh enclosures or railings.
- Rollers or pulleys at the ends of belt conveyors should be guarded to prevent fingers and hands from being drawn into pinch points.
- A shield, guard or housing should enclose each end and all other areas at floor level where workers could come in contact with moving parts.
- Avoid riding on conveyors, except those that incorporate platforms and control rooms for operating personnel.
- Conveyors should have conveniently located warning devices and emergency stop controls.
- Turn off power and lock the switch during maintenance.

Powered Industrial Trucks:

- Powered industrial trucks move material quickly and easily and save work and time.
- Know how to safely operate the trucks and to correctly react to every situation.
- Pay attention to maximum load limits and the condition of the bed—never overload.
- Check brakes, steering, controls, forks, hoist, warning devices and lights before and after each shift and report any malfunctions to supervisor.
- Back the truck down a ramp, but keep the load in front when going uphill.
- Tilt the forklift masts back when driving the lift and keep head, arms and legs inside.
- Keep the forks about 4 to 6 inches above the ground.
- Do not lift people.
- Sound the horn at a blind corner.
- Check clearances when loading or unloading.



Cranes and Derricks:

- Only trained operators are permitted to run cranes.
- The rated load must be plainly marked on each side of the crane and the crane must never be overloaded.
- Never work or stand underneath a crane that is moving material.
- If operating, do not swing loads over workers.
- Keep hoisting chains and ropes free from kinks.
- Use a load block hook with a sling--do not wrap chains or ropes around loads. Operators should make sure the sling clears all obstacles.
- Standard hand signals for boom cranes should be understood by both the operator and the signaler. (Refer to Hand Signals module).
- Crane operators should never remove their hands and feet from the controls while a load is suspended.

Review The Following Points

- All employees should be trained before operating machinery.
- Watch for coworkers when completing work tasks.
- Make sure all loads are balanced when moving.
- Keep all screens and safety shields in place.
- Use standard hand signals for communication.

True or False Answer Key

1. T, 2. T, 3. F, 4. T, 5. T

Material Handling Devices Quiz

True or False

Name _____

1. Use standard hand signals for communication. T F
2. Two-wheeled hand trucks are used for transporting heavy and bulky objects short distances. T F
3. Brakes aren't necessary on two-wheeled hand trucks, the operator can hold the truck in place with their foot. T F
4. Crane operators should never remove their hands and feet from the controls while a load is suspended. T F
5. Pay attention to maximum load limits, never overload. T F