

SPPOTTER TRAINING





DEFINITION
one that
looks or
keeps watch

Why Train for Struck By?

- › Historically incidents have been prevented by using spotters (the eyes and ears for operators of equipment moving in congested or awkward areas)
- › Results from these incidents are damaged equipment, loss of production, injured people and ultimately loss of life.
- › What have you seen? Could you share an incident that resulted from “the lack of” or “poor” spotting?

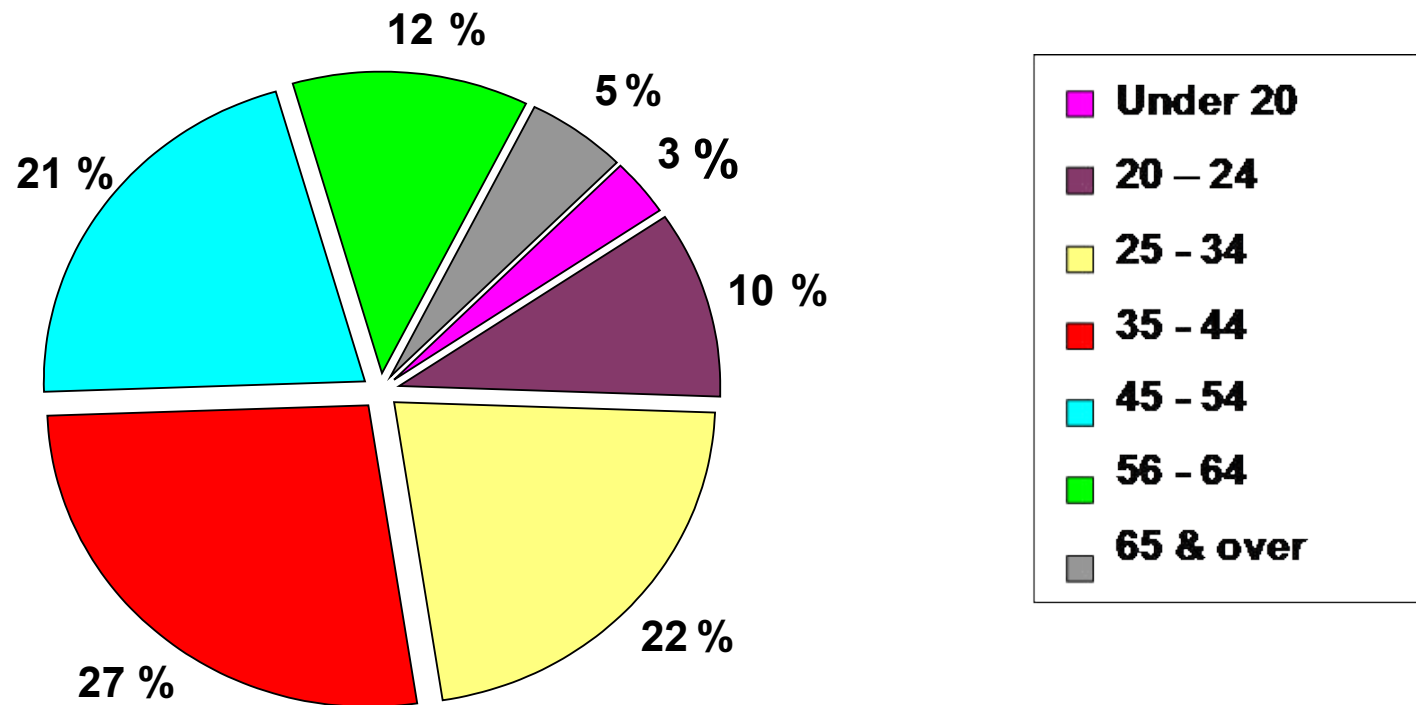
GOOD WORK PRACTICE

Area Pre-Walk

- › Prior to the movement of any objects or equipment the area which will be used for maneuvering needs to be walked by the Operator and Ground Person.
- › What to look for during the pre-walk:
 - Clear path of travel
 - Proper signage i.e., construction (if needed)
 - Overhead obstructions, i.e., power lines & buss bars, doors & rails, fire protection piping & linear beams, vent fans
 - Tight corners
 - Other personnel working in the vicinity

EQUIPMENT FATALITIES BY AGE GROUP

Source: Bureau of Labor Statistics



Industries Were Powered Industrial Truck Accidents Occurred

Mining	4
Construction	25
Manufacturing	95
Utilities Transportation	22
Wholesale trade	25
Retail trades	18
Service	7
Public administration	4
Total	200

- ▶ BEING STRUCK BY, OR CAUGHT IN- BETWEEN, ARE TWO OF THE LEADING CAUSE OF INJURIES AND FATALITIES ON CONSTRUCTION SITES!

- ▶ STRUCK BY (22%)

- ▶ CAUGHT IN- BETWEEN (18%)



Communications

› The single most important aspect of an effective spotter is communication.

› Communication needs to be:

- Clear
- Concise
- Maintained
- Appropriate for the operation

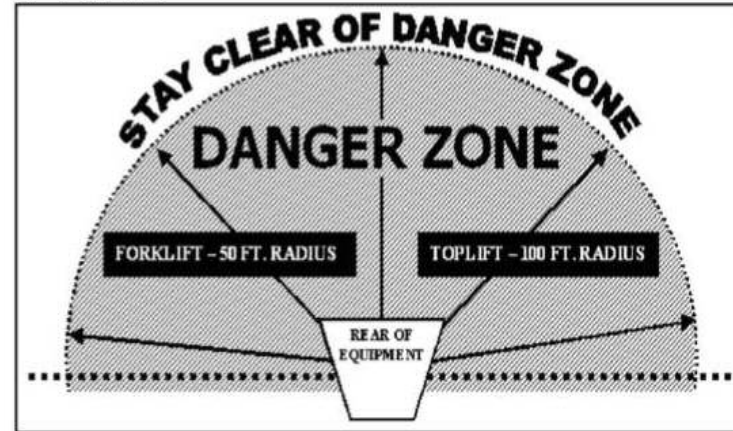
Hand Signals Ground Rules

- › *Where a difficult lift demands, use verbal communication or two-way radios instead of hand signals.*



Vehicle / Heavy Equipment Danger Zone

- ▶ Blind spots
- ▶ Rotating machinery
- ▶ Swing radius
- ▶ Travel Path

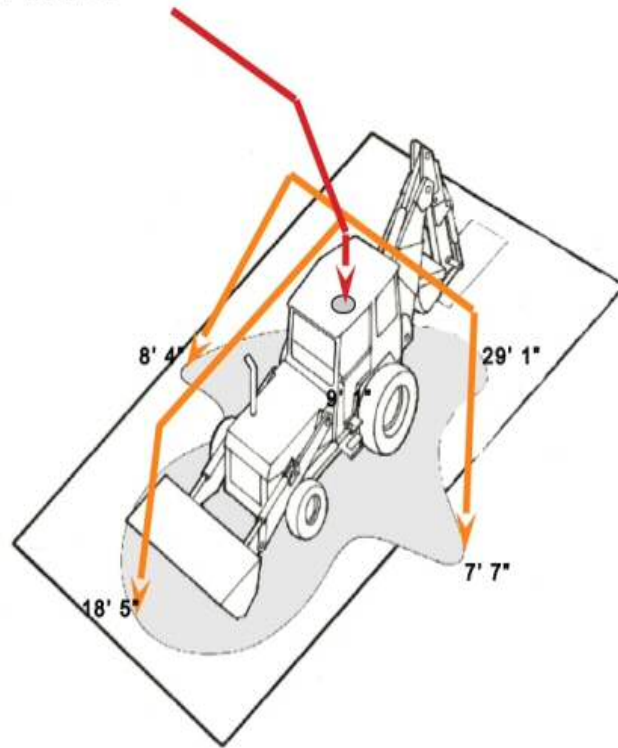


Approaching the machinery before acknowledging the operator
Non-essential workers on the area
Struck by overhead loads falling

IF YOU CAN
TOUCH THE
MACHINERY,
YOU ARE
TOO CLOSE!!!



Eye level 7 ft - 7 in above
ground level



Backhoe

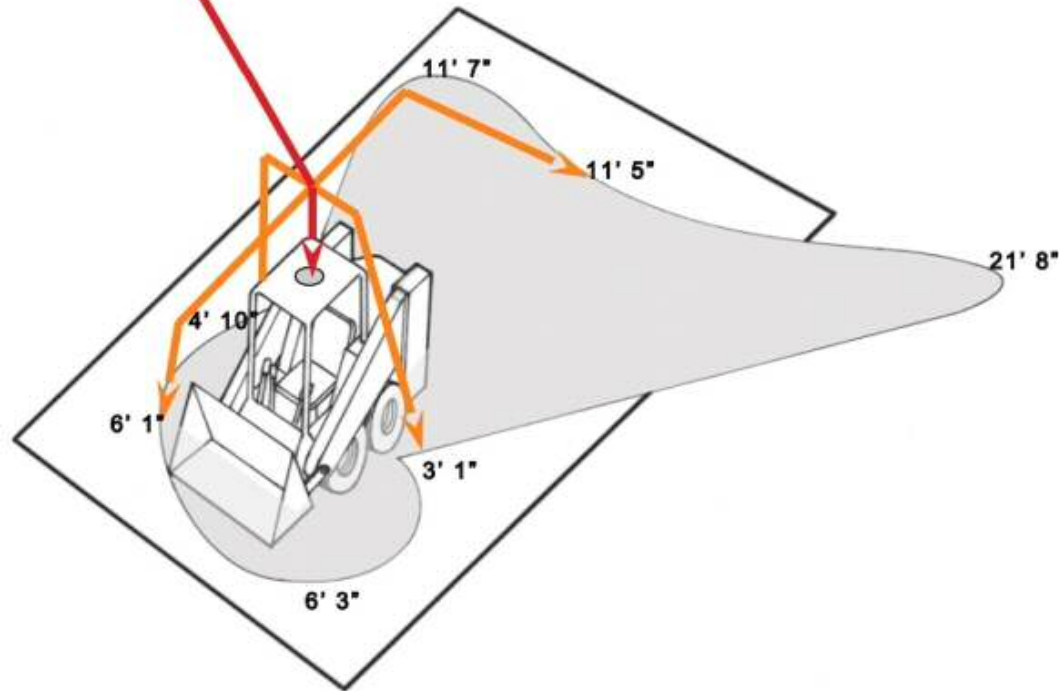
Learn to know the...

Danger-ZONE



THE SHADED AREA SURROUNDING EACH
VEHICLE REPRESENTS THE DANGER ZONE IN
WHICH THE VEHICLE OPERATOR'S VIEW OF
PEDESTRIAN TRAFFIC IS GREATLY REDUCED OR
OBSCURRED ALTOGETHER.

Eye level 5 ft - 5 in above
ground level



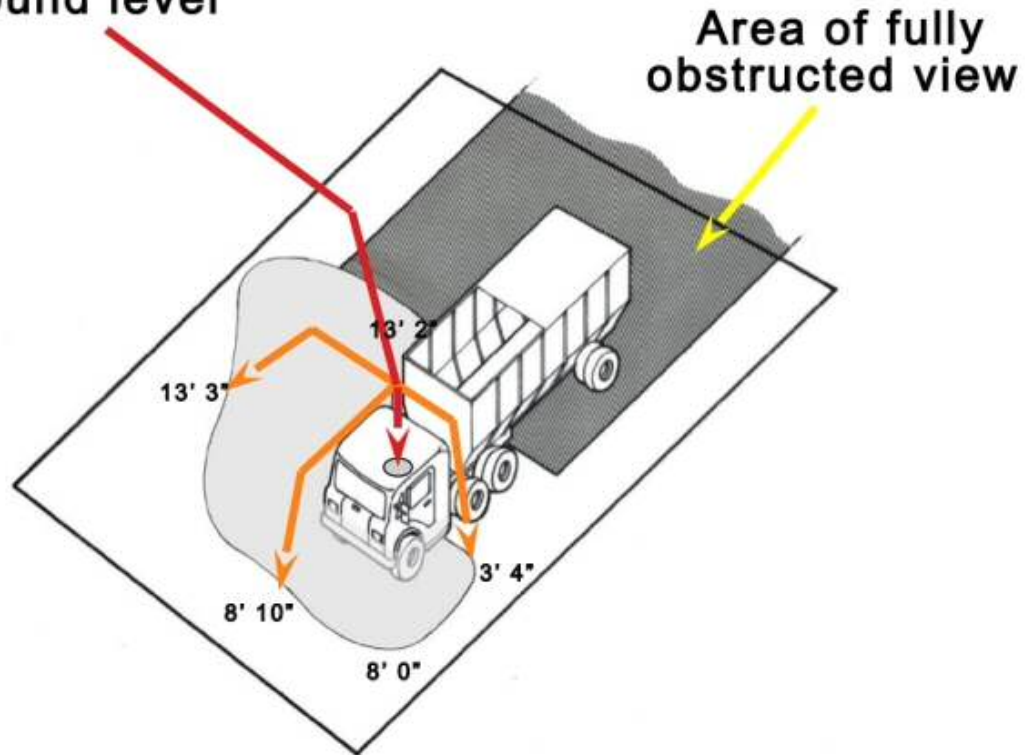
Bobcat/Skid Steer

Learn to know the...

Danger-ZONE

THE SHADED AREA SURROUNDING EACH VEHICLE REPRESENTS THE DANGER ZONE IN WHICH THE VEHICLE OPERATOR'S VIEW OF PEDESTRIAN TRAFFIC IS GREATLY REDUCED OR OBSCURED ALTOGETHER.

Eye level 8 ft - 0 in above
ground level



Refuse Truck

Learn to know the...

Danger-ZONE



THE SHADED AREA SURROUNDING EACH
VEHICLE REPRESENTS THE DANGER ZONE IN
WHICH THE VEHICLE OPERATOR'S VIEW OF
PEDESTRIAN TRAFFIC IS GREATLY REDUCED OR
OBSCURED ALTOGETHER.

Vehicle / Heavy Equipment Danger Zone

- ▶ Make sure no one enters the danger zone while the machinery is in operation, the danger zone is the area around the equipment/vehicle where the operator don't have a full visibility during normal operation. Stay at least ten feet away from all sides of the Machinery
- ▶ Front
- ▶ Both Sides (left, right) Yes, the right rear side is one of the most dangerous
- ▶ Back Yes, behind the machinery is also one of the most dangerous
- ▶ Up and Bottom

Vehicle / Heavy Equipment Danger Zone

If you're working near moving vehicles or equipment, what are the most important safety points to remember?

1. Stay alert at all times.
2. Don't distract yourself.
3. Keep a safe distance.
4. Keep off the equipment unless authorized.
5. Watch out for shifting or unstable loads.
6. Wear a bright orange vest if you are working near moving vehicles or heavy equipment.
7. Wear reflectorize clothing at night.

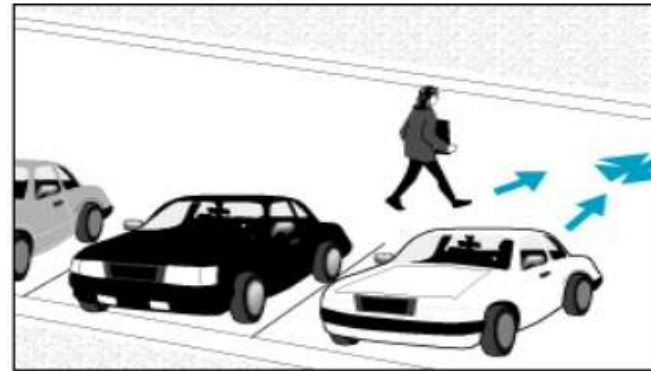


SPOTTERS –AN IMPORTANT REQUIREMENT

- ▶ There is the important rule for drivers and operators:

"Don't back up or move a heavy equipment unless you have a spotter directing your movement."

It's an easy rule to remember.



The important thing is to obey it.

When do you need a spotter?

Whenever backhoe/heavy equipment moves.

Why?

- Backhoe/heavy equipment have blind spots
- Operator cannot see the load.
- Operator cannot see the load landing area.
- Operator cannot see the path of travel of either the load or the equipment.
- Operator is too far from the load to judge distance accurately.
- In close proximity to overhead hazards.
- When backing a trailer

When to use a Spotter

- ▶ When:
- ▶ backing a vehicle or machinery
- ▶ entering or moving a vehicle or machinery in a congested area
- ▶ poor visibility
- ▶ close proximity
- ▶ Pedestrians/coworkers or other contractors on the surroundings
- ▶ lateral, overhead, or other obstructions



Task Responsibilities

Spotter

- Position self to enable driver to maintain visual contact
- Never cross the path of travel
- Wear proper PPE
- Communicate to the operator to STOP if I see any hazards
- Never ride on the vehicle while it is moving
- Keep the route free of people that don't need to be there

Operator

- › STOP immediately if I lose contact with the spotter
- › STOP immediately if instructed by the spotter
- › STOP immediately if anyone comes within 8ft of my vehicle
- › Operate so my speed does not exceed the pace of my spotter
- › Communicate the blind spots to the spotter
- › Eliminate distractions
- › Make sure windows and mirrors are clear

THE SPOTTER'S RESPONSIBILITIES

- ▶ SPOTTERS AND DRIVERS/OPERATOR MUST WORK TOGETHER
- ▶ The operator will discuss the positioning, backing, movement and plan with the spotter before proceeding.
- ▶ The operator shall stop the vehicle immediately prior to losing sight or l



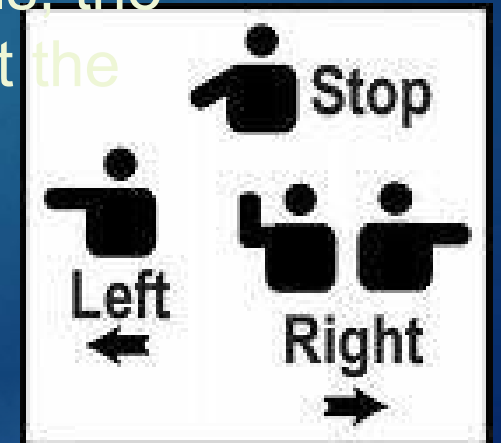
THE SPOTTER'S RESPONSIBILITIES

- ▶ In order to give you an unobstructed view of the entire movement, when directing the driver/operator, stand at the driver's side.
- ▶ It's important that the driver understands your signals, so get together with the driver before any movement and explain the signals
- ▶ allow for sufficient stopping and clearance



SPOTTER RESPONSIBILITIES

- Always be sure to use the same signals for the same moves (avoid misunderstandings)
- Hand signals are much better than vocal signals. Because of noise, a shouted signal may not be heard or may be misunderstood.
- If the driver is unclear at any point about the spotter's signals, the vehicle should be stopped immediately. Never assume what the spotter is signaling, if there is any doubt



Hand Signals Ground Rules

- › *Only one person should signal the operator.*
- › *Always keep the spotter/operator in view.*
- › *Anyone can give the STOP signal and it must be obeyed immediately.*
- › *Signals should be clear and, wherever possible, barehanded.*
- › *The load must be directed so that it never passes over anyone.*

THE SPOTTER'S RESPONSIBILITIES

STRAIGHT BACKWARD OR FORWARD – To move the vehicle in a straight line either forward or backward.



THE SPOTTER'S RESPONSIBILITIES

TURN – To move the vehicle either to the right or left while the vehicle is moving



THE SPOTTER'S RESPONSIBILITIES

DISTANCE TO STOPPING POINT – To provide the driver a visual reference for the distance to the stop point.



THE SPOTTER'S RESPONSIBILITIES

CLEARED TO LEAVE THE AREA – To show the driver the vehicle is clear of obstructions and is cleared to leave in the direction indicated.



THE SPOTTER'S RESPONSIBILITIES

STOP – Stop all movement of the vehicle, await further instructions.



Hand Signals Ground Rules

- › *Operators should not make a move until they receive and understand spotter signal. If contact between spotter and the operator is broken for any reason, the operation must stop.*
- › *Some situations call for two signalers. For instance, during a concrete pour, one signaler may be needed to direct the lift while the other directs the drop.*

Hierarchy of Controls

Most
effective



Least
effective

Elimination

Physically remove
the hazard

Substitution

Replace
the hazard

**Engineering
Controls**

Isolate people
from the hazard

**Administrative
Controls**

Change the way
people work

PPE

Protect the worker with
Personal Protective Equipment

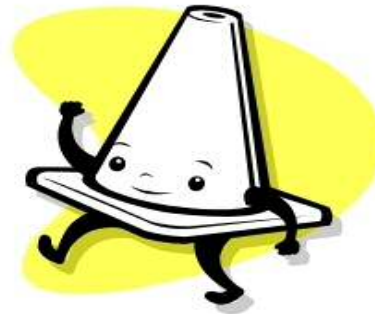
THE SPOTTER'S RESPONSIBILITIES

- ▶ When spotting, concentrate on spotting –The task at hand.
- ▶ Maintain eye contact with the driver/operator, even if you have to change position frequently.
- ▶ If the spotter needs to stop spotting momentarily for any reason, first make sure that the driver/operator **stops** the equipment.



BE SURE YOU'RE SEEN

- ▶ If you or someone else have to pass behind a vehicle or equipment:
 1. stop the vehicle or equipment first.
 2. As you're passing behind it, extend your hand at arm's length and place it against the back of the vehicle/equipment. Then if the vehicle/equipment starts to move, you'll be able to feel the movement and get out of the way.



BE SURE YOU'RE SEEN

- ▶ In addition to standing well to the driver's side of the vehicle/equipment, wear a fluorescent vest.
- ▶ In the dark, don't blind the driver by shining your flashlight in the rearview mirror.



BE SURE YOU'RE SEEN

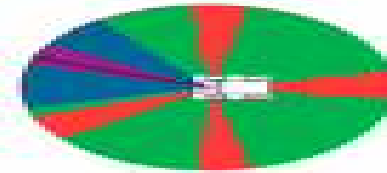
- ▶ Day or night, avoid walking backward. If you have to, when walking backwards, be careful not to trip (check the path).



Spotter Pre-Task Insert / Checklist

Pre-Task - Completed by Operator AND Spotter

- ☐ Ensure that distance backing be minimized
- ☐ Identify & remove any area hazards on the route
- ☐ Safest Route identified and chosen
- ☐ All pedestrians in path of moving vehicle cleared



Communication Plan

Apart from verbal communication, the driver and spotter must agree to communicate via one of the following:

- ☐ Hand Signals (Consider High Visibility Gloves)
- ☐ Two-Way Radios (if allowed)
- ☐ Lights ☐ Other
- ☐ Hand Held Air Horn

NOTE: Verbal Only Communication is not acceptable.

Spotter Responsibilities

As the SPOTTER on this job I WILL

- ☐ Position myself to enable the operator to maintain visual contact
- ☐ Never cross the path of travel of a moving vehicle
- ☐ Wear a high visibility vest
- ☐ Wear the PPE requirements for the area
- ☐ Communicate to the Operator to STOP if I see any hazards
- ☐ Never ride on the vehicle while it is moving
- ☐ Keep the route free of people that don't need to be there

Spotter Signature _____

Operator's Responsibilities

As the OPERATOR on this job I WILL

- ☐ STOP immediately if I lose visual contact with the spotter
- ☐ STOP immediately if instructed by the spotter
- ☐ STOP immediately if anyone comes within 8ft of my vehicle
- ☐ Operate so my speed does not exceed the pace of my spotter
- ☐ Communicate the blind spots of the vehicle to the spotter
- ☐ Turn my radio and other distractions inside my vehicle off
- ☐ Make sure my windows and mirrors are clear to ensure visibility
- ☐ Make sure my windows are open for spotter communications

Operator Signature _____

Blind Spot Activity

1. Stage a dump truck (or other large piece of equipment) in an open area or parking lot. If possible, secure several different types of equipment to demonstrate how blind spots vary from one piece of equipment to another. Lock-out the vehicle and remove keys from cab. Instruct one worker to sit in the cab and observe workers through his mirrors and windows.
 2. Position employees in various positions around the vehicle, including directly in front, on the right-side and behind the parked truck.
 3. Instruct the employees on foot to move to various locations, extending distances until the driver can see them in the mirrors. Place cones on the ground when they become visible.
 4. By completing this exercise around the vehicle you will be able to obtain the length and width of where workers are not visible, helping them realize the size and location of blind spots.
-

Variations: Park a heavy piece of equipment and stage a pickup truck in different blind areas around the equipment. Let workers sit in the operator's seat to visualize the blind areas. (Be sure to lock out the equipment and pickup when performing these types of exercises.)

Other variations of these exercises can be done by using different sized objects to illustrate how blind areas change depending upon the size of the object. Generally, blind spots become larger as objects are closer to ground level.

QUESTIONS

