Introduction:

Spotters are used to direct drivers/equipment operators who do not have a full view of the working area. OSHA requires the use of observers/spotters for backing vehicles with obstructed rearview and no back-up alarm. OSHA requires signaling by employees/spotters for backing earthmoving or compacting equipment with obstructed rearview and no back-up alarm. Spotters should be used to monitor an excavation for possible underground obstructions. OSHA required that underground installations be located prior to digging AND that only safe and acceptable means be used to find the exact locations. OSHA requires a competent person inspect each excavation before the start of each shift and throughout the shift as needed. Using spotters can help prevent workers from being struck by or caught in between equipment and other objects, two of the leading causes of deaths and injuries on construction sites.

Definition:

A spotter is an individual trained to look.

A spotter is a person designated to observe and direct equipment operators and drivers in order to maintain a safe working area. A spotter can have no other job duties while working as a spotter.
Use a Spotter When:

- Entering into or moving a vehicle or machinery within a congested area.
- Visibility is poor.
- Moving equipment or materials in close proximity to an excavation.
- Excavating when underground obstructions are present and if there is the possibility of unknown obstructions. (OSHA requires that the estimated location of underground utilities or other underground installations be determined before excavation begins. If the exact location of underground utilities cannot be established, excavation can proceed provided that acceptable methods to locate underground utilities are used.)
- Pedestrians, coworkers, vehicle traffic, or other contractors are on or in the work area or roadways.
- Overhead power lines, overhead obstructions and other obstructions present a hazard.

Spotter and Operator Responsibilities:

Spotters and equipment operators must work together.

Spotter responsibilities:

- Per OSHA requirements the spotter should be positioned to have a clear view of the areas the operator/driver cannot see AND to not be in harm’s way. Usually behind the equipment or vehicle in view of the driver/operator by mirror.
- Allow for sufficient stopping distance and clearance.
- Use hand signals or other appropriate communication (air horns, whistles, and radios). Because of noise a voice signal may be unheard or misunderstood.
- Always use the same signals for the same moves to avoid misunderstandings. All signals must be planned and reviewed before operation.
- Monitor excavation activities to avoid underground obstructions that are known or unknown.
- Always be visible to operator. (If you can’t see operator, the operator can’t see you.)
- If you need to pass through on the operator’s blind spot, make sure the operator understands your actions.
• Always stay focused, avoid distractions, and refrain from the use of cell phones, texting, and two way radios unless radios are used to communicate with operator, while spotting.

• Always make eye contact with the operator before communicating signals.

**Equipment operator responsibilities:**

• Never move your equipment or vehicle when you have limited visibility or unsure clearances without having a spotter direct your movement.

• Discuss the positioning, backing, movement, and means of communication plan with the spotter before proceeding.

• Stop the equipment immediately upon losing sight of the spotter.

• Discuss signals with spotter before any equipment movement. Be consistent.

• Stop the vehicle/equipment immediately if the spotter’s signals are unclear. Never guess what the spotter is signaling. Observe a stop signal from anyone in the vicinity.

• Always make eye contact with spotter before proceeding with an action.

**Other Workers - Be Sure You’re Seen:**

If you have to pass behind a moving vehicle/machine:

1. Make eye contact with the spotter/driver/operator.

2. Only move after you get a signal it’s safe to pass.

**All Workers on Foot:**

1. Wear a fluorescent vest.

2. Stand where the driver/operator can see you.

3. Make eye contact.

4. Use a flashlight at night.
5. DO NOT shine light in rearview mirror or windshield – it blinds the driver/operator.
6. Shine light where you are walking.

**Spotter Test Questions**

1. Spotters can do other job duties while performing spotter tasks.
   
   T
   
   F

2. A spotter is needed to give timely warnings for operators when it is difficult for the operator to maintain the desired clearance by visual means.
   
   T
   
   F

3. Spotter and equipment operator should always maintain contact.
   
   T
   
   F

4. A whistle, air horn, hand signals and radios are ways for the spotter and equipment operator to communicate.
   
   T
   
   F

5. Spotters should wear florescent vest so they are easily visible to the operator.
   
   T
   
   F

6. A spotter should be used when there are known or the possibility of unknown utilities present.
   
   T
7. A spotter can make up his hand signals as he goes along and the equipment operator will figure it out.
   
   T
   
   F

8. Spotters are allowed to talk on cell phones, visit with coworkers, and leave the work area at anytime.
   
   T
   
   F

Answers:
1-F; 2-T; 3-T; 4-T; 5-T; 6-T; 7-F; 8-F
STANDARD HAND SIGNALS For CRANE OPERATION

- **EXTEND BOOM**
- **DOG EVERYTHING**
- **TRAVEL**
- **RETRACT BOOM**
- **EXTEND BOOM (ONE HAND)**
- **RETRACT BOOM (ONE HAND)**
- **HOIST**
- **LOWER**
- **USE MAIN HOIST**
- **USE WHIP LINE**
- **RAISE BOOM**
- **LOWER BOOM**
- **MOVE SLOWLY**
- **RAISE THE BOOM & LOWER THE LOAD**
- **LOWER THE BOOM & RAISE THE LOAD**
- **SWING**
Common Safety For Crane Operation

• A crane operator should always move loads according to the established code of signals, and use a signaler. Hand signals are preferred and commonly used.
• Signalmen must be used whenever the operator cannot see the load, or the landing area.
• Where loads are picked up at one point and lowered at another point, two signalmen may be required, one to direct the lift and one to direct the decent.
• Only a qualified person should give signals to the crane operator.
• There should be only one designated person at a time giving crane signals.
• Hand signals should be used only when the distance between the operator and the signalman is not great and the conditions allow for clear visibility.
• A crane operator should move loads only on crane signals from one person.
• A crane operator must obey STOP signals no matter who gives it.
• The person giving crane signals must be in clear view of the crane operator or have dedicated communications means.
• The person giving crane signals must have a clear view of the load and the equipment,
• The person giving crane signals must keep persons outside the crane's operating area. Any request or questions should be addressed to the signaler.
• The person giving crane signals should never direct a load over a person.
• No part of a crane or load should come within 15 feet of any power line. High power transmission lines may require additional clearances.
• Each crane operator should be held directly responsible for the safe operation of the crane. Whenever there is any doubt as to SAFETY, the crane operator should stop the crane and refuse to handle loads until safety has been assured.

These safety rules should by no means be considered complete for all situations of crane operation.

Through the OSHA and American Pipeline Contractors Association (APCA) Alliance, APCA developed this Toolbox Talk for informational purposes only. It does not necessarily reflect the official views of OSHA or the U.S. Department of Labor. 05/2010