



# TOOLBOX TALKS

## Caught In/Between Toolbox Talk # 1

### Preventing Excavation/Trench Cave-ins

Ask the following questions and give time for answers.

**What are the hazards?** Bodily or equipment entrapment in soil.

**What are the results?** Broken or crushed limbs and bones, entrapment, suffocation, head injury, internal damage, and death.

**What should we look for?** Stable rock and soil type (A, B, C), depth of excavation, cave-ins, water in trench, weather conditions (rain, frost), water table, protective systems, competent person, operation of heavy equipment near excavation, barricades, and falling loads.

#### How do we prevent these results?

- \* A competent person must evaluate excavations daily. Excavations should be re-evaluated after events such as rain.
- \* Use shoring equipment, shielding, and/or sloping or benching systems for excavations greater than 5 feet in depth or less when deemed necessary by the competent person.
- \* Examine protective systems in accordance with manufacturer's recommendations and remove damaged systems from service.
- \* Understand soil types: "A"-most stable (clay, hardpan), "B"-next most stable (silt, loam, unstable dry-rock), "C"-least stable (gravel, loamy sand).
- \* Excavated material/other objects must be kept at least 2 feet from edge.

#### Let's talk about this site now.

- \* How can you prevent cave-ins? **Shoring, shielding, sloping, and/or benching**
- \* At what depth is cave-in protection required? **5 feet or less depending on the assessment by a competent person.**
- \* Name some conditions that can increase cave-ins. **Rain, heavy equipment, vibration, spoil piles, etc.**

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# TOOLBOX TALKS

## Caught In/Between Toolbox Talk # 1

### Preventing Excavation/Trench Cave-ins (cont.)

**The unfortunate reality**— From 2011 to 2018 there were **157 trenching fatalities** across the United States. These fatality incidents were preventable with the use of a protective system, proper employee training, and implementation of a safety and health management system.

**\*\*\*AN UNPROTECTED TRENCH IS AN EARLY GRAVE \*\*\***



Record questions below that you want to ask about this site.

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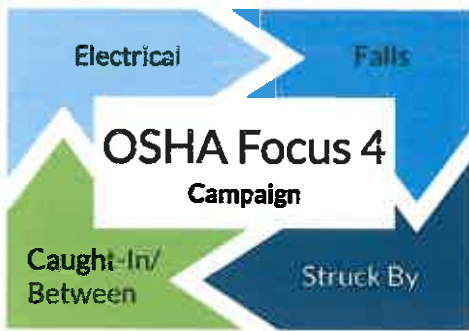
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*\*Source: Bureau of Labor Statistics, 2018 Annual Fatality Data Report*



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# TOOLBOX TALKS

## Caught In/Between Toolbox Talk # 2

### Safely Performing Maintenance on Site Equipment

Ask the following questions and give time for answers.

**What are the hazards?** Bodily entrapment with object, potential or stored energy

**What are the results?** Broken or crushed limbs and bones, suffocation, punctures, head injury, internal damage, and death

**What should we look for?** Equipment not secured, not chocked, no secondary protection device, equipment operating nearby, and maintenance performed on unstable ground

#### Actual Incident:

In October 2014, a 31 year old heavy equipment operator was killed when he was caught under the wheel of a backhoe that he was servicing. As he was working, the left front wheel of the backhoe loosened and came off. He attempted to fix the backhoe by lifting the wheel and digging the backhoe's front bucket down into the ground. He stood by the side of the machine and reached in to turn on the ignition. The backhoe was in gear and immediately lurched forward, striking the victim and pulling him under the equipment. The worker was asphyxiated and died at the scene.

#### How do we prevent these results?

- \* Service equipment in accordance with the manufacturer's recommendations.
- \* Use safety equipment such as chock blocks, jack stands, etc.
- \* Inspect all safety equipment in accordance with manufacturer's recommendations. Use appropriately rated equipment.
- \* Always service equipment on stable, level ground.
- \* Always engage the parking brake while maintaining equipment.
- \* De-energize and lock-out the equipment's energy. (hydraulics, electrical system, etc.)

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# TOOLBOX TALKS

## Caught In/Between Toolbox Talk # 2

### Safely Performing Maintenance on Site Equipment (cont.)

Ask the following questions about this site and ensure every item is covered.

- \* Do you have a designated place to service equipment?
- \* What types of safety equipment can you use to prevent equipment from falling on you while you service it? **Parking brake, jack stands, chock blocks, etc.**
- \* Does your company have a standard operating procedure (SOP) or job hazard analysis (JHA) for maintaining equipment? Have you read it?



Source: IUOE National Training Fund

BLS/OSHA 2016

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# TOOLBOX TALKS

## Caught In/Between Toolbox Talk # 3

### Working Safely Near Moving/Energized Parts

Ask the following questions and give time for answers.

**What are the hazards?** Bodily contact with moving and energized parts, potential and stored energy

**What are the results?** Broken or crushed limbs and bones, suffocation, punctures, head injury, internal damage, amputations, and death

**What should we look for?** Machine guards, moving and energized parts, nip-points, lockout/tagout, loose/hanging clothing, jewelry and hair

#### Actual Incident:

In October 2017, a 25 year old employee was repairing a truck. He was replacing a damaged hydraulic line, which involved fastening and tightening fasteners on the new hose. The truck had a tip bed. The hose was located behind the cab. The bed was elevated, so that the employee could access the hose. The employee was working between the frame of the truck and its bed. The bed was not secured or blocked to prevent unintentional, unexpected release of stored energy. The bed fell, striking the employee and pinning him between the frame and the bed. The employee was fatally injured.



#### Let's talk about this site now.

- \* How can you prevent accidental contact with energized equipment and moving parts? **Guard moving and energized parts or lockout/tagout.**
- \* What should you do if you notice a missing or broken/altered guard? **Do not use equipment, shut it down when it is safe to do so and inform the supervisor of the danger.**
- \* Does your company have a machine guarding safety program? Have you read it?

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# TOOLBOX TALKS

## Caught In/Between Toolbox Talk # 4

### Preventing Injuries with Skid Steer

### Loaders

Ask the following questions and give time for answers.

**What are the hazards?** Struck-by or pinned against an object or equipment

**What are the results?** Broken or crushed limbs and bones, entrapment, internal damage, and death

**What should we look for?** Proper operation, designated work areas for employees and equipment, back up alarms, rollover protection, proper equipment training

#### Actual Incident:

In February 2018, three workers were performing demolition operations at a worksite. A skid steer loader was being used to remove demolished materials and transfer the materials to a dumpster. Two laborers climbed the side of the dumpster to adjust some of the materials to create more working space within the dumpster. The operator of the skid steer did not see the employees and was transferring more materials to be dumped. As the loader approach one employee jumped down from the side of the dumpster but the other was pinned between the dumpster and the bucket of the loader. The employee sustained several injuries to include broken bones and a crushed sternum.

#### How do we prevent these results?

- \* Always use and maintain the safety devices provided by manufacturer.
- \* Interlocked controls; Backup alarms; Seat belts and Roll Over Protective Systems (ROPS).
- \* Operate the loader from the operator's compartment, never from the outside.
- \* Stay seated when operating the loader; work with the seatbelt fastened and the restraint bar in place.
- \* Keep your arms, legs, and head inside the cab while operating the loader.
- \* Load, unload, and turn on level ground when possible; operate on stable services when possible.
- \* Keep people clear when a load is being lifted or when in the operating zone of the equipment.
- \* Never go beyond the manufacturer's load capacity for the machine.
- \* Develop and implement a traffic control plan and train all employees on plan elements.

OSHA STANDARDS: 1926.600 and Section 5(a)(1) of the OSHA Act

Source: 2013 CPWR— The Center for Construction Research and Training [www.cpwr.com](http://www.cpwr.com)



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# TOOLBOX TALKS

## Caught In/Between Toolbox Talk # 5

### Working Safely Around Cranes and Material Handling Operations

Ask the following questions and give time for answers.

**What are the hazards?** Struck-by loads or equipment, getting caught-in crane housing or counterweight, crane tipping, crushing

**What are the results?** Broken bones and limbs, crushing injuries, internal damage, and death

**What should we look for?** Guarded swing radius, stable footing, lift plan, overhead loads

#### Actual Incident:

In April 2016, an employee clearing debris was working next to a hydraulic crane. The employee was working near the right side of the crane in the crane operator's blind spot. The crane operator began rotating the crane and the counterweight of the crane pushed the employee into the crane's structure. The employee was crushed between the superstructure and frame of the crane resulting in fatal injuries.

#### How do we prevent these results?

- \* Fully barricade area around moving superstructures during lifting or moving operations.
- \* Never go into an area during lifting operations unless absolutely necessary and then only when the operator is fully aware of your presence.
- \* Prior to lifting, ensure that all cranes are placed on firm footings. Utilize outriggers as per the manufacturer's requirements/instructions.
- \* Ensure that all material lifts are performed by qualified riggers.
- \* Use a qualified signal person anytime a crane is being utilized to lift loads.



Lets talk about this job. What operations could create a caught-in/between hazard?



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# TOOLBOX TALKS

## Caught In/Between Toolbox Talk # 6

### Demolition Safety

Ask the following questions and give time for answers.

**What are the hazards?** Collapse, falling materials, live utilities, falls

**What are the results?** Broken or crushed limbs and bones, entrapment, internal damage, and death.

**What should we look for?** Load supporting beams, structural stability, proper employee training, engineering survey, reasons for demolishing the structure, means and methods of demolition activities

#### Actual Incident:

In March 2017, two workers were performing demolition operations inside a three story residential home. The home was abandoned and deemed unsafe to inhabit due to deteriorating conditions. The demolition crew began razing the structure from the roof level and proceeded downward to the second floor. During the course of removing the second story interior walls the employees were struck-by an exterior wall which resulted in an interior collapse of the house. The exterior walls were not shored or braced causing the wall to collapse inward onto the employees with the resultant weight crashing through to the lower floor. One employee was fatally injured and the second employee sustained broken bones, crushed limbs and multiple contusions.

#### How do we prevent these results?

- \* Demolition of exterior walls and floors must begin at the top of the structure and proceed downward.
- \* Structural or load-supporting members on any floor must not be cut or removed until all stories above that floor have been removed.
- \* All roof cornices or other ornamental stonework must be removed prior to pulling walls down.
- \* Employees must not be permitted to work where structural collapse hazards exist until they are corrected by shoring, bracing, or other effective means.
- \* Brace or shore up the walls and floors of structures which have been damaged and which employees must enter.
- \* Select, wear, and use appropriate personal protective equipment (PPE) for the task; inspect PPE before use.
- \* Inspect all stairs, passageways, and ladders; illuminate all stairways.
- \* Shut off or cap all electric, gas, water, steam, sewer, and other service lines; notify appropriate utility companies.
- \* Guard wall openings to a height of 42 inches; cover and secure floor openings with material able to withstand the loads likely to be imposed.
- \* Floor openings used for material disposal must not be more than 25% of the total floor area.
- \* Use enclosed chutes with gates on the discharge end to drop demolition materials to the ground or into debris containers.

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