

UNITED RENTALS NEWS RELEASE:

8 Critical Trench Box Safety Tips from United Rentals

United Rentals Outlines How Safety Can Power Productivity in Underground Projects

STAMFORD, Conn. - August 19, 2020 - United Rentals, Inc. (NYSE: URI®) today shared eight trench box safety tips to help contractors and utilities promote safe work practices in trenching and excavation operations. Developed from United Rentals' extensive experience in trench safety projects, this guidance can help advance worker knowledge about trench hazards and safe deployment of trench boxes to support a productive work environment.

Trench work is inherently dangerous. Trench boxes are among the protective systems that can be used in trench and excavation projects to help keep workers safe and protected from cave-ins. Made from aluminum or steel, trench boxes are designed to protect workers from the lateral earth pressures and weight of the soils that exist in a trench or excavation. They are not designed to prevent a trench wall from collapse, but when they are used properly, can be a very effective protective system solution.

"Used appropriately, a trench box can help protect workers from serious and sometimes fatal injuries if a cave-in occurs," said Shane Wareham, director of sales and marketing at United Rentals. "But too often, contractors misunderstand the right way to build and install a trench box, and some take shortcuts that put workers' lives at risk. A seemingly small mistake with a trench box could have huge unforeseen consequences. When in doubt, contractors should always turn to experts to help keep workers safe."

Here are eight tips to help avoid making a potentially serious safety mistake when using a trench box.

Don't count on a trench box to prevent a cave-in. Remember that a trench box is a protective system designed to keep workers safe, not an active shoring designed to keep trench walls from collapsing. If a trench worksite needs both worker protection and active shoring, contractors should use a system that applies a load to the trench wall greater than the earthen load coming from the trench wall. This may include hydraulic bracing systems.

Follow the manufacturer's tabulated data. It is essential to use a trench box within its tabulated data. One common problem is using a trench box at a depth greater than the maximum depth it is rated for. Another is neglecting to build the box properly. The manufacturer's tabulated data will help instruct the contractor on the allowable configuration, assembly and placement in a trench.

Watch the bottom. There have been worksites where contractors place a box three feet off the bottom of a trench instead of the maximum of two feet that OSHA regulations allow. If the box is more than two feet off the bottom, there is a risk of a cave-in from below. In addition, make sure the trench box is rated for the full depth of the trench.

Watch the top. If a contractor is using sloping in combination with a trench box, typically, the top of the trench box must be at least 18 inches above the point where the soil intersects the shield. That 18 inches serve as a roll-off protection, providing added guarding from falling or sliding materials or small equipment

Replace any damaged spreader pipe or trench box panels. One of the responsibilities of a competent person at a trench project is to inspect all of the safety and shoring equipment that is being used. One of the many important shield components needing routine inspection is the

spreader pipe. Often the spreader pipe can get bent or damaged, especially if an excavator lifts or moves the trench box using the spreader pipe instead of the actual lift points. Another condition that must be reviewed by the competent person is panel deflection. If the shield exhibits deflection on one of the trench box panels, it should be taken out for further inspection and possibly removed from service. In cases where there are potential or actual structural member damage to the shield, the manufacturer and or engineer must be consulted for proper repairs to be made before putting back into service.

Install panels or plates in the right place. If a contractor is using trench shield panels as end panels, always follow the engineering guidelines that address end protection. Do not place the panels directly against the spreader pipes. If there is a cave-in, the panels are intended to push against the end posts of the trench box, not against the spreader pipes, which could deflect, putting the protective system at risk. Per OSHA regulations, a shield system (trench box) must be deployed according to the manufacturer's tabulated data or other tabulated data from a registered professional engineer. The end protection must also have similar tabulated data.

Stack with care. When stacking trench boxes, make sure the stacking pockets are lined up and the boxes are pinned together so the boxes can be properly secured vertically. If there are different thicknesses of trench boxes – say 4 inch, 6 inch and 8 inch – the thinner trench boxes usually go on top of the thicker ones – but always refer to the manufacturer's or professional engineer's tabulated data.

Backfill the gap. By definition, a trench will always be wider than a trench shield placed within it. To eliminate the gap, backfill the void to stabilize the shield. Remember that the shield must always be situated so as to restrict lateral or other hazardous movement.

United Rentals Trench Safety Solutions

With more than 92 trench safety locations and the largest fleet of shoring and underground excavation rental equipment in North America, United Rentals provides customers customized, cost-effective [trench safety and excavation rental solutions](#). It supplies OSHA-compliant trench protective systems including shoring, shielding, lasers and optical instruments, and more. United Rentals services help companies in pre-bid analysis on protective system solutions, on-site consultation and engineering designs that can be applied successfully on a project.

About United Rentals

United Rentals, Inc. is the largest equipment rental company in the world. The company has an integrated network of 1,164 rental locations in North America and 11 in Europe. In North America, the company operates in 49 states and every Canadian province. The company's approximately 19,100 employees serve construction and industrial customers, utilities, municipalities, homeowners and others. The company offers approximately 4,000 classes of equipment for rent with a total original cost of \$14.63 billion. United Rentals is a member of the Standard & Poor's 500 Index, the Barron's 400 Index and the Russell 3000 Index® and is headquartered in Stamford, Conn. Additional information about United Rentals is available at unitedrentals.com.

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