

# SAFETY MATTERS



Safety Matters is intended to promote discussions of safety issues among underground construction professionals. You should always read and understand the operator's manual before operating any equipment. For additional information, please e-mail [safety@ditchwitch.com](mailto:safety@ditchwitch.com).

## TOPIC:

### Tracking—HAZARDS A HORIZONTAL DIRECTIONAL DRILL TRACKER MIGHT FACE

#### POTENTIAL HAZARDS

- Struck by
- Drawn into
- Buried hazards

#### PRECAUTIONS

- ALWAYS track drilling progress.
- Do not stand on ground over drill string unless drilling has stopped.
- Locate drill head after each joint of pipe if possible.
- Never push broken pipe.
- Never assume drill string will follow a pre-drilled path.
- If crossing a known utility, expose the line to the depth of the bore (or to the vertical tolerance zone around the line) and watch crossing both directions.
- If drilling parallel to an existing line, expose the line and track bore more frequently to ensure tolerance zone is maintained.
- When drill head surfaces, use DrillLok® or Tracker Control or a lockout procedure to disable thrust and rotation before entering the pit or approaching the drill string.
- Stay away from material being installed. If swivel binds, material can rotate.
- Never use a pipe wrench to break joints loose or tighten joints. Only use breakout wrenches provided with the drill.

#### INFORMATION/FACTS

- Buried utilities can vary in depth throughout their length. For example, a utility may be at 2 feet deep on each end of a block; but places in between may be at 4 feet deep.
- A broken drill string being pushed through the earth can create a new bore path.
- If an electric line is struck by a drill string, the ground can become electrified. Under certain circumstances, it can even explode when the strike occurs.

- Rotating drill heads and backreamers can “walk” an exposed drill string sideways.
- If the swivel malfunctions or there is a lack of adequate tension on the swivel, material being installed can rotate and strike nearby personnel.

#### TALES FROM THE TRENCH

- A drill operator was drilling under a residential road and broke a drill pipe. After pulling back and removing the broken pipe, the operator began feeding a new string back in the hole. The operator and tracker assumed that the drill string would follow the original bore path, so they did not track the bore. Unknown to them, the drill head had veered off midway and had come up through a sidewalk and gone all the way through a minivan in a driveway. It tore the door off the van as it exited. Fortunately, no one was injured.
- A crew was drilling through a dense forest and broke a lined pipe. They dug a pit at the drill head and pulled out the broken string with a backhoe. They decided to push the remaining string approximately 30' to the pit, assuming it would follow the original bore path. Because there was no beacon, they did not know that the broken pipe veered off the original path. The end packed with dirt, allowing fluid pressure to build up in the drill string. When the broken end of the drill string surfaced, the liner in the pipe was forced out of the end of the pipe like a javelin. It pierced the tracker operator in the shoulder, severely injuring him.
- A tracker operator was using a large pipe wrench to break joints loose. For some reason, the machine operator rotated the pipe. This caused the pipe wrench to strike the tracker operator. He incurred a fractured jaw, had blood coming from his ears and was taken by helicopter to a local hospital. He subsequently required speech therapy.

**DON'T LEARN SAFETY  
BY ACCIDENT**

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