

EASY WAYS TO IMPROVE EFFCIENCY OF HDD JOBS

Learn common mistakes drillers make and how you and your crew can avoid these mistakes while improving your efficiency.



Mistakes or miscalculations on drilling jobs can cause huge time delays, affect job safety, inflict damage to roads and equipment, and cost your company a lot of money. With so many years in the HDD business, we've seen just about every mistake that can be made on a job site.

In this e-book, we share the most common mistakes drillers make, give tips on how to avoid these mistakes, and provide tips on how to improve the efficiency of your next job.

LET'S DIG IN.









USING THE WRONG TOOL FOR GROUND CONDITIONS

Each piece of HDD tooling is specially designed to perform best in particular ground conditions. Pay attention to these specifications. For example, if you use a tool meant for cobble conditions, thinking it will easily cut through clay or sand, you're going to experience problems that can create a speed bump.

Instead of performing a quality drilling action combined with the appropriate amount of fluid to carry out cuttings, your tool will likely just ball up. Your backreamer will simply push the material to the side, compacting it into areas with the least resistance.



TRYING TO RUSH THE JOB

Allow your HDD tooling to perform the function for which it was designed. Never try to rush a job in the interest of saving time or money. When you don't allow the equipment to carry out cuttings with the appropriate amount of fluid, it forces all the material toward the machine, building up pressure in the ground, which can cause the road to hump or equipment to break.



PULLING A REAMER BACK TOO FAST

One of the major rush issues we've seen is pulling a reamer back too fast. We'd love to say you should pull back your reamer "as fast as your drill rig will go!" But that's not the best procedure. The key is to create a clean hole and make it as easy as possible to pull the product pipe, then pull it in without damaging it. Even if the reamer pulls back as fast as your drill carriage will travel, it doesn't necessarily mean it's a clean hole.

Give the reamer plenty of time to mix and your pump plenty of time to get enough fluid into the hole to carry the cuttings out. The bigger the hole diameter, the more cuttings you are trying to carry out–so, the more fluid required. How long that takes will be partially determined by your fluid pump capacity.







USING THE WRONG AMOUNT OF DRILLING FLUID

A lot of drillers don't calculate how much fluid they need for the job and rarely account for needing extra fluid. Before beginning, talk to your HDD manufacturer about the size of the equipment you'll be using for pilot boring and backreaming to determine how much fluid you will need and how much extra you should have on hand.

On the job, pay attention to the amount of soil you must remove from the hole to ensure that you use sufficient drilling fluid and proceed slowly enough to flush your cuttings out as you proceed. If you're cutting a big hole, you'll need to remove a large volume of soil. Pullback too fast, or don't pump enough fluid into the hole, and the time you thought you were saving could end up in a failed pullback altogether. These factors will vary based on soil conditions, hole size, and distance of bore.



CUTTING A HOLE YOUR RIG CAN'T HANDLE

If you know that you are cutting a hole that is bigger than your rig is designed for, don't just treat it like every other bore. We recommend conducting multiple ream operations that increase in size to reduce the stress on your rig. Bigger machines can do passes with incrementally larger drilling reamers but smaller machines require stepping up gradually. You will have to drill the same hole several times, so it's even more important that you use a stabilizing barrel in front of each cutting reamer. However, the result will be a clean and stable hole at a depth you can control.







NOT MAINTAINING TRANSMITTER HOUSING

A quality transmitter housing is one of the must-have HDD tools in your operation. Though your transmitter is built with durability in mind, it's still one of the most fragile parts of your drill string. Break it or damage it and you're forced to stop drilling. Not to mention the fact that a replacement can cost thousands of dollars.

Even though directional drill products are designed to perform under constant stress, they require frequent checks and maintenance. Always make sure know your transmitter housing design and features, properly secure the lid before you begin drilling, clean your fluid ports with a pressure washer after each use, choose a housing with epoxy protection, and check the wear on your transmitter regularly.

USING TOOLS NOT DESIGNED FOR HDD

Underground drilling comes with its own challenges and conditions. Using tools that are not designed specifically to withstand different load capacities can cause equipment to break or fail, setting your job back and costing time and money. Always use tools and equipment that is designed for underground work, as they have been tested to perform well under conditions unique to HDD.

We see this most often with swivels and pullback devices. Make sure you are using tools designed to get muddy and dragged over rocks, not something designed to be pulled between telephone poles.







RUNNING OUT OF SUPPLIES OR NOT HAVING REPLACEMENTS

We've seen a slew of drilling operations get stopped cold because crews run out of supplies or need replacement equipment. We get too many calls from HDD drillers asking us to rush-ship a new blade or adapter to keep their operation going. It's not a big issue for us (we can overnight anything we have in stock), but drillers are forced to pay hefty shipping fees and wait for deliveries.

Set up a system to keep your crews drilling. If you normally carry five of a certain type of blade, make a rule that you reorder when you get down to two. This isn't just a system for storage, either. Bringing in used tools or empty bins tells your purchaser what needs to be ordered.

The point is to make sure you never run out of the supplies you need to keep working.



ONLY TALKING TO AN HDD DISTRIBUTOR WHEN SOMETHING BREAKS

An HDD distributor or manufacturer has likely seen it all. They also know the ins and outs of all their HDD tools and the best applications for each tool. The best part is they are often ready and willing to help solve problems and troubleshoot your next boring project. Don't wait until something breaks or needs replacing before calling up your HDD distributor or the manufacturer. Reach out to them before you start your next job to get the right tool for your conditions.



TALK TO THE EXPERTS

HDD drilling involves lots of moving parts, and we're not just talking about your rig. We are committed to helping directional drillers be productive and profitable. Contact our knowledgeable staff to get answers to all your HDD tooling questions and get the right tools for the job...the first time.

Call **800-558-7500** Visit **melfredborzall.com**





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