

Diamond core bit drilling tips & trouble shooting

<p>Always secure the drill rig either with a mechanical anchor, vacuum system or by use of the jack screw. NEVER stand on the base and drill without anchoring.</p> <p>Level the drill rig by use of the base leveling screws, and a small level attached to the column permanently or by a magnetic strip on the level. This procedure will ensure a perpendicular hole.</p> <p>Never let the bit spin in the hole without applied pressure. This will cause the diamonds to round off and the bit segments will heat and glaze over.</p> <p>Turn on water before starting the drill motor. Otherwise, the water jacket seals heat up and become brittle, losing water.</p> <p>When your bit encounters steel (rebar), relax pressure about 1/3 and allow the bit to cut at its own rate. DO NOT PUSH THE BIT. Some operators turn the water down after exiting the steel to sharpen the bit. If you engage in this practice, turn the water back up once the bit is sharpened.</p>	<p>When drilling high PSI concrete or concrete with very hard aggregate (i.e., river rock, flint rock, etc.), the bit will sometimes glaze over. To open or redress the bit, do one of the following:</p> <ul style="list-style-type: none"> • Decrease water by ½ for a few minutes and as the bit starts to increase speed, gradually increase the water until the flow is back to the original state. • Pour masonry sand into the slurry then follow the above directions. • Add a sandblast media such as “Black Beauty” to the slurry and follow the above directions. • Drill the bit into a cement block, soft vitrified grinding wheel or cinder block. Repeat the procedure until the bit is open again. <p>When finished drilling, turn the water down very low and back the core bit out of the hole with the motor running.</p>	
Symptom	Cause	Remedy
Loss of segment	Bit too hard for the material it is drilling, causing it to pound and fatigue.	Use a softer bond if possible. Increase motor RPM if possible.
	Overheating due to insufficient water for cooling and flushing.	Increase water flow to where slurry is milky and flows easily.
	Machine setup is not rigid or loose material is in the cut and the bit segment hangs.	Tighten anchor, check vacuum system for proper vacuum pressure.
	Shooting cable, when drilling pre-stress.	Use a bit with more segments, such as a Husqvarna 5400 pre-stressed diamond core bit.
Segment cracking	Bit is too hard for the material being drilled.	Use a softer bit if possible. Increase motor RPM.
	Machine setup is not rigid.	Tighten anchor, check vacuum system.
Barrel cracking	Too much feed pressure.	Back off on the pressure.
	Segment too hard for material being drilled.	Use bit with softer segment.