





# Troubleshooting

The three categories of tool failure: abrasive wear, heat failure, and mechanical failure, each contribute to less than optimal tool performance. Wear and deterioration can be observed through cracking, crater wear, chipping, deformation, or fracture.

The chart below shows typical end-of-life tool problems, possible causes, as well as proposed solutions.

Problem	Possible Cause	Solution
 <b>Poor Rotation</b>	Worn toolholders	Replace worn holders
	Excess material build-up on tool	Increase water flow to drum
	Holders not properly aligned	Remove incorrect holders and correct positioning
	Excessive machine speed	Slow down machine
	Cutting too deep	Decrease cutting depth (make 2 or more passes)
 <b>Excessive Steel Body Wear</b>	Caused by highly abrasive material	Consider using a tip design with bigger start diameter
	High rotation speed	Reduce rotation speed (if possible) Consider using a heavier body tool
	Worn belts are not removing the material	Check and replace worn belt
 <b>Extreme Carbide Tip Wear</b>	Hard material (aggregate)	Consider using a larger carbide tip tool
	Heat build-up on tool	Increase coolant (water) to the drum
	High rotation speed	Reduce rotation speed (if possible)
	Cutting too deep	Decrease cutting depth (make 2 or more passes)
 <b>Tip Fractures</b>	Extremely hard material (aggregate)	Consider using a larger carbide tip tool
	Heat build-up on tool	Increase coolant (water) to the drum
	Poor rotation	Check for worn holders, excess material build-up on tool, etc.
		Consider doing a "warm-up" cut when starting
	Excessive machine speed	Slow down machine
	Using hard objects for tool installation	Use air hammer installation tool, rubber mallet or copper hammer