

METAL DRILLS

Trouble Shooting



Code		Problem									
1		Breaking of drill									
2		Outer corner breaks down									
3		Cutting edges chip									
4		Drill splits up centre									
5		Drill will not enter work									
6		Hole rough									
7		Hole oversize									
8		Tang breaks									
1	2	3	4	5	6	7	8	Possible Reason	Solution		
●				●	●			Dull point	Sharpen		
●								Drill has front taper due to wearing	Sharpen		
●			●	●				Insufficient lip clearance on point	Grind correctly		
●		●						Lip clearance too great	Regrind to correct clearance angle		
●								Drill has incorrect point grind	Regrind correctly		
●	●							Flutes clogged with chips	Remove drill from hole and to clear flutes		
●								Spring or backlash in drill press, fixture or work	Check each item for rigidity and alignment		
●		●	●		●			Feed too heavy	Reduce Feed		
	●							Cutting speed too high	Reduce speed		
	●				●			Dry cutting, no lubricant at cutting edges	Apply cutting fluid		
				●				Drill web (core) diameter too big	Thin web to original size		
					●			Fixture/Clamping not rigid	Secure job firmly		
						●		Unequal angle or uneven length of cutting edges	Regrind to same lip lengths and angles		
						●		Spindle run-out/Loose spindle	Check machine		
							●	Bad fit between shank taper & socket. The drive & alignment is controlled by the taper fit	Remove dirt, nicks, or burrs or replace worn socket		