

Does Circular Saw Blade Depth Matter?

Getting the Longest Life From your Blade



The following test was conducted using a 9" metal cutting circular saw machine with (3) Morse Metal Devil[®] 9" - 48 tooth steel cutting blades. The test material was 6" x 1/4" steel plate.

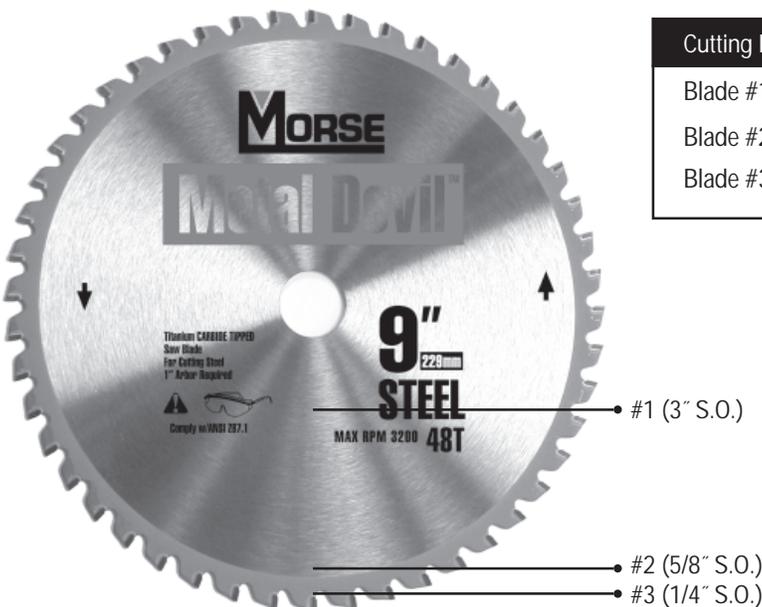
Each of the three blades cut the steel plate at a different stand-out depth. Stand-out depth is the distance that the blade protrudes through the thickness of the material.

Blade #1 had the saw fully locked against the saw's base plate, allowing the blade to cut at its maximum rated depth (stand-out was 3").

Blade #2 used a lesser depth of cut. The stand-out was 5/8". This is a standard depth of cut used for woodcutting applications. We recently had a blade return (low cut life) that had this exact stand-out depth.

Results:

Blade #3 was run using the Evolution 230 manual's recommended cut depth (approximately 1/4").



Cutting Depth	# Cuts	Comments
Blade #1 (3" S.O.)	300+	Blade still cutting w/mild vibration.
Blade #2 (5/8" S.O.)	128	High feed force.
Blade #3 (1/4" S.O.)	95	High feed force w/long cut times.

Conclusions: Metal Devil steel cutting circular saw blades have better life, require less feed force and cut faster when run in the full depth position.

Reason: Cutting through steel plate while using a shallow cutting depth forces the blade to cut through a large cross-sectional area. This places high stresses on the carbide blade tips and reduces blade life.