Correct Way to Sharpen a Blade?



Source: www.TurfMagazine.com

gwoodcutter: "Can someone explain to me how to sharpen a blade correctly and not blue the blade? Can someone also explain what it is and how to avoid this?"

Patriot Services: "You're overheating the blade and ruining the temper. Keep the grinder, sander, whatever moving. It doesn't mean the blade is shot, but that spot will dull first.

"Believe it or not, the angle (30 degrees optimum) is more important that actual edge. A razor edge may sound cool, but in reality its quickly wiped away."

32vld: "All steels are heat-treated. The heating process determines the hardness of the metal.

"The phrase 'making the metal lose its temper' is a result of overheating metal when working on it. Whatever the original hardness that piece of metal was made to have has been lost; the metal is now softer. A mower blade that has become softer will get dull faster.

"An indication of metal overheating is that the metal will turn blue in color.

"Sharpening a blade will overheat it if you press too hard against the grind stone or whatever tool you use to grind/sharpen the blade with. The greater the friction, the greater the heat developed.

"Trying to take off too much material will result in too much friction, then too much heat.

"Use a grinder that has a built-in pump that will pour water or cutting oil on the blade as you grind to remove heat and keep the blade temp cool.

"Use a grinder that is designed to sharpen. They run at slower speeds than a bench grinder. Slower speed results in less friction, less heat. I have dry ground blades and never blued the metal.

"Have lots of patience, a bucket of ice and water, take light cuts, that means do not press the blade hard against the bench grinder stone wheel. Just enough pressure is applied to keep the metal in contact with the grinding wheel. Take a pass or two then stick blade into the bucket to cool down.

"Having a bucket is pointless if you are going to let the blade get hot. Patience and ice water will keep the metal from getting past warm. Getting the metal hot will only lose its temper and blue the metal.

"Having any drill-operated grinding attachment can overheat the metal. Take time, light pressure, and dip the blade into the ice water often keeping the blade from getting too hot.

"If you can't hold the metal without discomfort, then the metal was allowed to get too hot.

"There is never any need to wipe the blade dry after dipping in water to cool down. Just pull the blade out of the ice water and continue sharpening.

"Careless use of a drill bit or hacksaw can cause metal to blue.

"Determined effort with a file can cause metal to blue.

"The key to sharpening mower blades is not to let them get that bad that a long time will be needed grinding the blades to get a good edge again.

"When I sharpen my blades it takes me more time to jack the front of the mower off the ground and impact gun the blades off then the time I spend grinding them.

"A blade that needs very little sharpening will need very little time grinding. Less time grinding, less heat created."

gwoodcutter: "Very informative post! I'm gonna try that with the bucket of ice water. Probably will dip the blade before I start to have it cooled to begin with. Another question would be, how do you get the correct angle if you are using a bench grinder, hand-held angle grinder, etc?"

Patriot Services: "You can adjust the tool rest on most bench grinders. I've gotten good over the years with eyeballing."