

Why Stone a Phonopoint Diamond Dressing Tool?

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Phonopoint diamond dressing tools are normally conically ground to a 60, 75, and 90 degree angle point. The point is dead sharp and fragile. When forming a small internal radius with a 60 degree included angle phonopoint tool, the sharp point can easily break off, cleave, or shear. Usually, small concave radii should be dressed with 80 grit and finer abrasive wheels, but those wheels can cleave a sharp diamond point.

Phonopoint tools are made with natural diamonds. Usually, the raw diamond materials are oval or elongated shapes but some phonopoints are made with a somewhat round diamond bortz. Round bortz comes in all shapes and sizes. When round bortz is set there isn't any grain direction selected so that the grain runs straight to the point tip. When a grinding wheel spins against it, the tip can easily shear or cleave. To overcome this condition, stone a small 45 degree angle on the tip.

Stoning is done with a hard fine grit abrasive stick 320 grit or finer, a diamond resin bonded hone 320 mesh or finer, or a 320 mesh diamond plated file at 45 degrees. Turn the phonopoint in little

increments as you stone a second angle on the end. The second angle on the phonopoint will give it strength to help keep it from breaking, shearing or cleaving. By doing this, the diamond tool will last much longer. This also applies to other conical tools which have a dead sharp point.

Larger carat weight conical dressing tools usually have a point radius such as .005, .010, .015, .020, and larger. These tools are more expensive than a simple, small phonopoint. Even within phonopoints there are better tools and more expensive tools. More expensive phonopoints have bigger base diameter sizes and use oval or elongated diamond material. Elongated and oval diamond material has the grain running to the point. These larger diamond tools last longer and can be used for tougher applications such as angle dressing, side wheel dressing, and convex radii dressing. Good, high quality diamond tools give consistent better results.

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