

*The most accurate modified lathe developed, CAD design drastically minimize harmonic vibrations, ultra fine threads provide unsurpassed accuracy, lowest possible CG, auto alignment technology eliminate "parallel adjustment". Your new Eagle modified lathe is the smallest precision trackside lathe in the world.*

**CAUTION: YOU MUST WEAR SAFETY GLASSES OR OTHER SUITABLE EYE PROTECTION WHENEVER OPERATING THIS LATHE. \*\*\*\*\*CAUTION\*\*\*\*\***

The lathe is design for re-cutting the commutator of your racing motor. Re-cut the commutator as soon as you notice any large decrease in motor performance. Usually, 27 turns stock motor should be re-cut between 5 to 20 runs. 7 to 11 turns motor should be re-cut every 2-3 runs. 12 to 14 turns motor should be re-cut every 4-5 runs. 15 to 17 turns motor can be re-cut every 10 runs.

This machine comes standard with a carbide-cutting tool. It works well, but requires more frequent sharpening. The carbide-cutting tool will do a quality job, but it cannot match the finish of the cut or the durability you'll get from the optional diamond-cutting tool. Carbide replacement units are available from us directly. Also, we have developed a new type of diamond cutting tool (Xipp #90020) that cuts 3 times sharper than other diamond bits on the market.

If you bought a diamond cutting tool, take good care of it and it will last a long time. The diamond is extremely hard. That's what gives the commutator such an excellent finish. Its hardness also makes it very brittle and easy to damage. The diamond's hardness allows it to wear very well with almost no sharpening required.

Whichever tool you use, its height is crucial. Diamonds are especially sensitive to changes in height and angle. A minor change can make a big difference in the quality of the surface finish.

In either case, the tool must be set dead center to the commutator. Use the flat shim stock provided with your lathe and/ or make your own shims out of plain paper. If you don't have the instruments to measure cutting tool height and are eyeballing it you may err by a few thousands on the high side but never set the tool below center. It is best to experiment on an old stock armature until you get the quality of cut that pleases you.