1. Cut off the damaged area of the wood shaft so that no fraying and splinters can be seen. When cutting the damaged area, make sure that it is a 90° cut.

   For an exact fit, make sure that the shaft diameters of the two segments are identical. Even 1/10mm difference can make a repair difficult.

2. Secure the drill with the holder to a table top. Mount the appropriate sized socket with an allen key to the Arrow-Fix and attach the entire unit into the drill chuck.

3. Manufacture of the Inside Cone: Set the drill on a moderate speed and to a continuous operation. Do not touch the moving Arrow-Fix. Apply even pressure to the wood shaft and do not bend while drilling.

   The drilling process begins as the shaft contacts the drill.

   The discharge of wood shavings can be facilitated through the continuous in and out movement of the wood shaft.

   As you near the end of the socket with the shaft, you should be careful that none of the wall of the shaft is damaged.

   Stand in front of drill when making repair.
Aligning Diameter for the taper tool: Turn the drum to the position of the desired diameter, set an arrow shaft on the prism to adjust the drum with the body and tighten the screw with the allen key. Once you have set up your diameter for the shaft size, it will work for nock and point because the same sized bores are diagonally opposite of each other.

Manufacturing the Outside Cone:
To make the cone for the repair joint and point cone, take the taper tool with the point symbol. For nock cones choose the taper tool indicated with the nock symbol.

The nock and point are tapered by hand. Lightly turn the arrow shaft clockwise. Depending on the wood type, you may need to use more or less hand strength. The tapering process is complete when the point of the shaft has been achieved and no more shavings are created.

The outside and inside cones are set together with a light turning movement. The surface of the outside cone should completely set into the inside cone. If the outside cone is not completely set into the inner cone, rework them.

For working with epoxy, you should follow the manufactures instructions. When epoxy has been applied, the outside and inside cones are set together with a light turning movement. If the outer cone bounces back while fitting together with the epoxy, make a slit on the outer cone surface to allow the air to escape.

Directly after epoxying the joined parts should be set into the prism of the tool and fixed with the o-rings. It is important to pay attention that the glued joint is placed in the middle of the prism. Make sure that no excess epoxy runs out onto the prism. The curing time of the epoxy is dependent on the surrounding temperature and the type of epoxy.

Finish:
After the curing process you can take the arrow out of the prism. Use fine sandpaper to smooth the repair joint. If there is a gap on the repaired joint, mix fine sawdust with epoxy to fill the space. Lightly sand to even the surface.