A New Level of Power and Performance

Power, high torque and performance from Foredom's new TX Flex Shaft facilitate the multiple prefinishing and finishing steps for this cast ring and stone-setting process

By Mark B. Mann

When manufacturing and repairing jewelry products, rotary equipment is essential to the process. Nothing is more frustrating or potentially damaging to the task than equipment that offers less than smooth, reliable performance. Foredom has manufactured the new TX flex shaft capable of delivering this and more, resulting in greater efficiency, consistency and valuable time savings in the job at hand.

This 14k yellow gold men's ring casting will be prefinished, the platinum top soldered and the ring finished. The final step will be bead and bright cut setting of a 7.5mm stone.

First, prefinish the inside of the ring using the Foredom's TX flex shaft and No. 52 quick change handpiece with a 3M® Trizact band. Round the ring on the mandrel and complete the prefinishing by filing and cross sanding.

Tack-weld the top onto the ring into the precise position then torch-solder it using easy flowing solder. File the top to fit the dimensions of the ring. Using dividers, locate and mark the center of the top plate. With an automatic center punch, create a small divot at the center mark.

With the ring secured in a ring clamp, drill a pilot hole in the top using the number 30 handpiece and lubricated standard twist drill. With platinum, a moderate speed with constant torque is required.

Enlarge the diameter of the pilot hole using a lubricated reamer bur. Constantly check while burring to make sure your enlarged hole is centered in the plate. Again, use moderate speed with constant torque.

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The ring is now ready for the final steps of the setting procedure.

Using a lubricated tapered cone bur, enlarge the top portion of the plate.

Prepare the bearing for the gemstone by using a 7.4mm or slightly smaller lubricated high-speed steel setting bur. Use a moderate speed when burring and constantly check for depth and level.

Place the gemstone in its bearing. The top of its table should be even with or slightly higher than the surface of the platinum top. All that's left is the bead and bright graver work.

The TX delivered smooth even speed for prefinishing and finishing, constant torque during the stone-setting procedure and provided the power necessary to complete the job.

The Foredom TX flex shaft is ideal for use with the Foredom model DP-30 drill press. The TX has 1/3 horsepower, the most horsepower of any Foredom flex shaft unit previously made. The motor is made with advanced rare earth magnets, giving it more constant and reliable torque at all speeds of operation. When in use, the TX has no hesitation, roughness or vigorous bouncing when stone setting, wax carving, prefinishing, polishing and more. A switch for reversing the motor's operational direction is available from Foredom.

The Tool Tips here are from an article which first appeared in the April 2003 issue of Professional Jeweler Magazine.

Photographs by Mark B. Mann