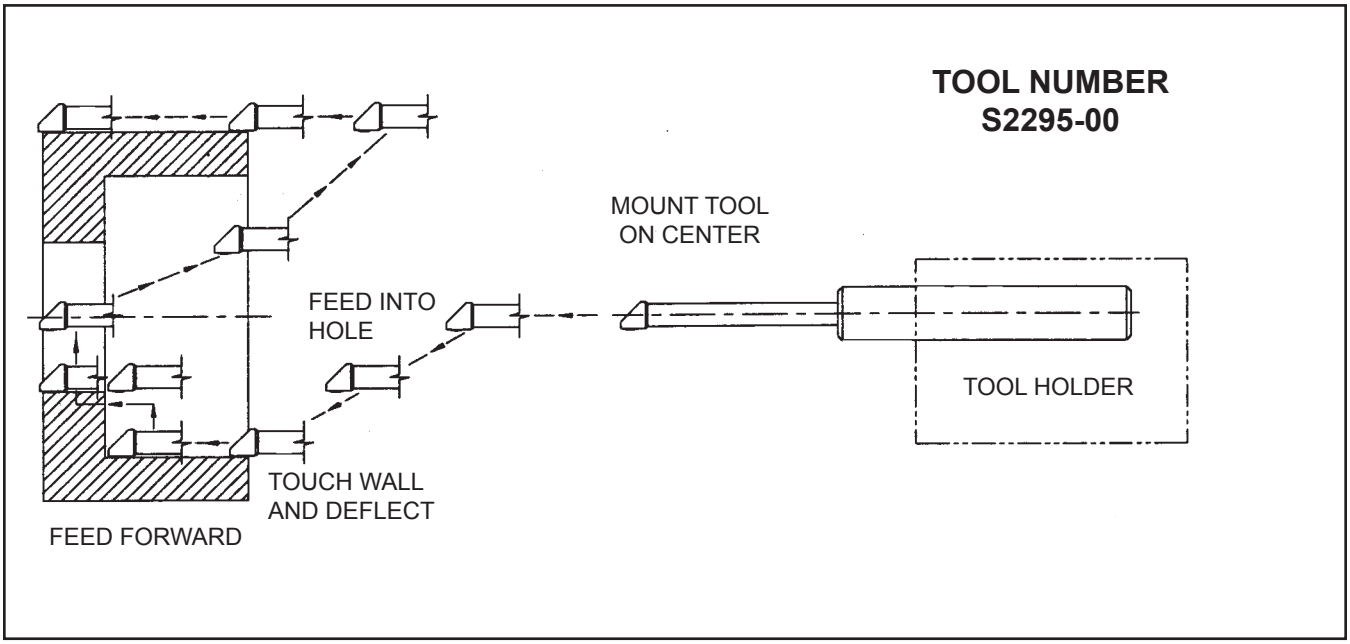
TM-10
April '12

INSTALLATION AND OPERATING INSTRUCTIONS

ELLIOTT BORING-BAR STYLE DIAMOND BURNISHING TOOL



Part Preparation:	100/120 RMS
Feed Rate:	.003"/.004"
	750 Max Surface Feet per Minute
Coolant Required:	Water soluble or oil
Maximum Tool Reach:	2.861"
Minimum Hole Diameter:	.500"

The Elliott Boring-Bar Style Diamond Burnishing Tool is designed for lathes or similar turning machines to provide an improved surface finish on a manufactured part. This burnishing tool can be used on most metals with a hardness below HRC40.

Tool Set Up and Operation:

1. Mount the burnishing tool so that the center of the diamond is on-center and perpendicular to the wall of the hole being burnished.

2. Flood coolant on the part that is going to be burnished. Turn the machine on and feed the diamond stem into the hole. Position the diamond so that it contacts the wall of the hole.

3. Once the diamond is in contact with the wall, move the diamond approximately .020" to .030" toward the wall. This will apply tool-to-part pressure required to displace the material in the burnishing process. (The amount of pressure required will vary from application to application.)

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4. **a.** Feed the burnishing tool forward into the hole (see suggested feed rate on other side). Continue flooding the tool with plenty of coolant.

b. Once you have achieved the required depth, move the diamond away from the wall and then remove it from the hole.

5. Once the burnishing tool has been removed from the hole, stop the machine and check the finish. If the result is not to the required specification, repeat the above steps on another part.* On the next part, move the stem a few more thousandths against the wall. This will apply more pressure on the surface being burnished.

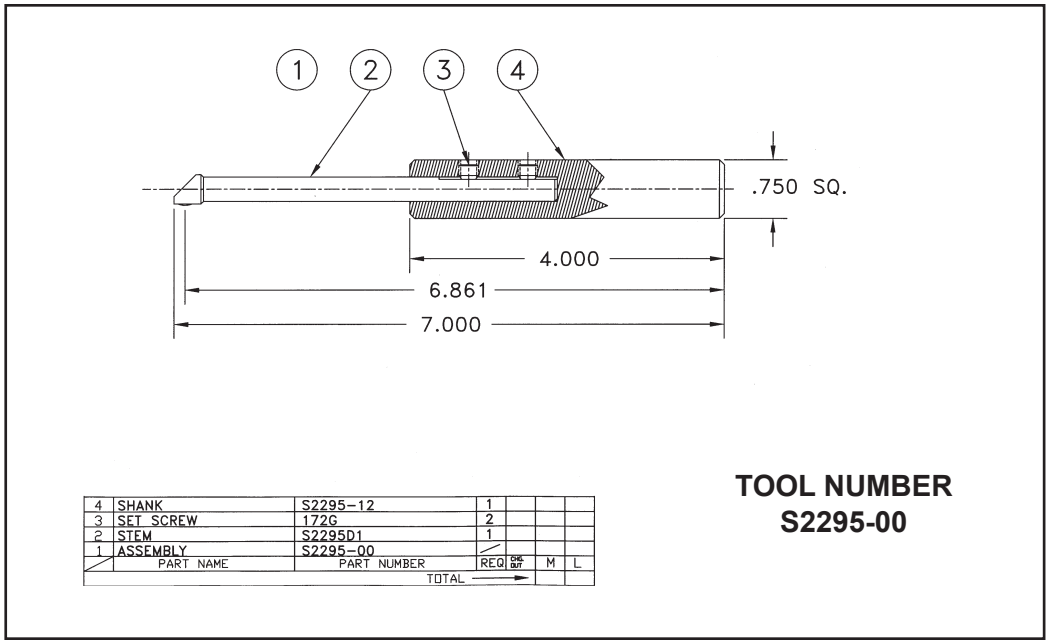
Note: Burnishing is a one pass process. Repeated burnishing on the same surface will not give you accurate feed, speed and pressure data needed for burnishing other parts.

Tool Tips:
If you cannot get enough tension on the stem, try the following:

1. Angle the tool slightly. This will provide more clearance for the tool to flex.
2. Cut the stem off at a desired length. This will increase your tension, but **decrease** your reach.

Caution!:
1. **Do not** deflect the stem any more than .120" after you have made contact with the wall. More than .120" may cause the stem to break or permanently bend.
2. **Do not** feed the tool on or off the part that is being burnished.
3. **Do not** burnish intermittent part surfaces.
4. Use coolant at **all** times. The diamond's precision ground surface can be damaged if the tool is used without a flood of coolant on the diamond.

Tool Maintenance
To replace the diamond stem (Det. 2), loosen the two set screws (Det. 3) on the shank (Det. 4), and pull the diamond stem out. Insert the new diamond stem into shank, and tighten the two set screws firmly. To order a replacement diamond stem (Part Number: S2295D1), contact **Monaghan & Associates, Inc.** at **1-800-732-4565** or fax **937-259-9241**.



4	SHANK	S2295-12	1			
3	SET SCREW	172G	2			
2	STEM	S2295D1	1			
1	ASSEMBLY	S2295-00				
	PART NAME	PART NUMBER	REQ	CHG DWT	M	L
		TOTAL				

TOOL NUMBER
S2295-00

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