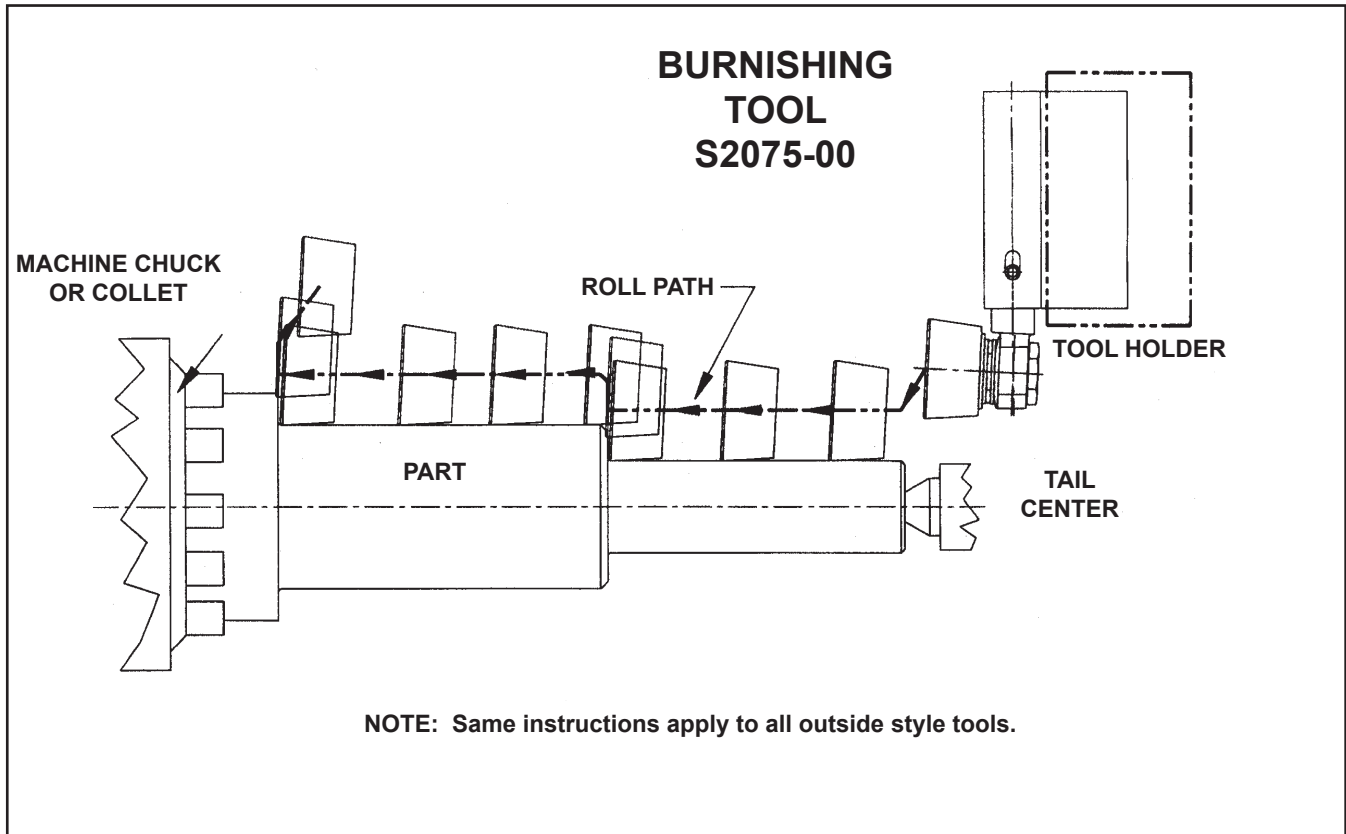


INSTALLATION AND OPERATING INSTRUCTIONS

ELLIOTT CARBIDE ROLL BURNISHING TOOL



Operating Instructions:

Part Preparations - 100/120 RMS
 Feed Rate - .004/.008 Max 1200 SFM
 Coolant Required - water soluble or oil
 Ensure bearings are sufficiently greased at all times.

The Outside Surface style burnishing tool can be used to burnish O.D.'s and flat face surfaces.

Mounting:

The tool has a 1" shank. The shank will slide into the machine's tool pocket, allowing the tool to project for part clearance.
 A 3/4" and 1 1/4" shank are available. Right- and left-hand shanks are also available.

Spring loaded:

The Elliott outside surface style burnishing tool has two series of springs for bi-directional spring loading.

One series of springs, located in the shank, allows the entire head assembly to deflect when the carbide roll is pushed against an O.D. surface. A second series of springs is located directly behind the carbide roll. These springs allow for deflection of the carbide roll when the tool is fed directly into a flat face surface or shoulder.

Tool Setting (ID and OD Surfaces):

Before the tool can be operated, it must be determined how much spring deflection is required and the proper feed rate. This is determined as follows:

Spring deflection should be determined first. Bring the carbide roll in contact with the workpiece and deflect the head assembly .025".

(continued on reverse)

Tool Setting (cont.):

Immediately, upon full .025" deflection, feed the tool across the surface at a feed rate between .004/.008" per revolution.

Check finish to determine if acceptable. If finish is unacceptable, there are two adjustments:

- 1) Increase or decrease the spring pressure between tool and part.
- 2) Increase or decrease the feed rate per revolution.

Be sure not to exceed the maximum deflection allowed by the tool (approximately .200"). The set screw located towards the rear of the shank can be tightened to preload the spring so the deflection does not have to be so great.

Tool Setting (Flat Face surfaces):

Determination of spring deflection for burnishing of flat face or shoulder surfaces is made by feeding the tool forward until the carbide roll contacts the work surface. After the initial contact, continue forward approximately .015". This will cause a like amount of spring deflection. Immediately, upon .015" spring deflection, feed the tool across the surface with the carbide roll leading at the point of contact at .004"/.008" per revolution feed rate.

Check the surface finish to determine if acceptable. If finish is unacceptable, increase the spring deflection an additional .015". Again, check surface finish to determine if acceptable. Be sure not to exceed the maximum deflection allowed by the tool (approximately .044").

⚠ NOTE: LUBE FITTING AND SET SCREW IN THE AXLE CAN BE SWITCHED IF IT IS NECESSARY. GREASE TOOL BEFORE SHIPPING.

ASSEMBLY NOTE:
ASSEMBLE TOOL WITH NO PRELOAD ON THE SPRING. JUST TIGHTEN THE SET SCREW TO REMOVE END PLAY.

14	BEARING RACE	S2075D17	1
13	HEX. SOC. SET SCREW	128B	1
12	SLUG	ED18	1
11	BELLEVILLE SPRINGS	579-44	13
10	TOOL HOLDER	S2075D13	1
9	PIN	P8386-24	1
8	BELLEVILLE SPRING	579-94	1
7	AXLE	S2075D10	1
6	ROLL	S2075-05	1
5	THRUST BEARING	P1067-1	1
4	THRUST RACE	P1067K	1
3	SHANK	S2075D3	1
2	LOCK NUT	PC76-0050818	1
1	ASSEMBLED TOOL	S2075-00	~
	PART NAME	PART NUMBER	REQ. DRG. OFF.

SPRING FORCE INFORMATION	
DET. 8	
DEFLECTION	FORCE
.011	95 LBS.
.022	145 LBS.
.033	165 LBS.
.044	170 LBS.
DET. 11	
DEFLECTION	FORCE
.064	65 LBS.
.127	119 LBS.
.191	165 LBS.
.250	208 LBS.

NOTE: BELLEVILLE SPRINGS DET.11 TO BE STACKED IN SERIES.

TOOL NUMBER
S2075-00



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