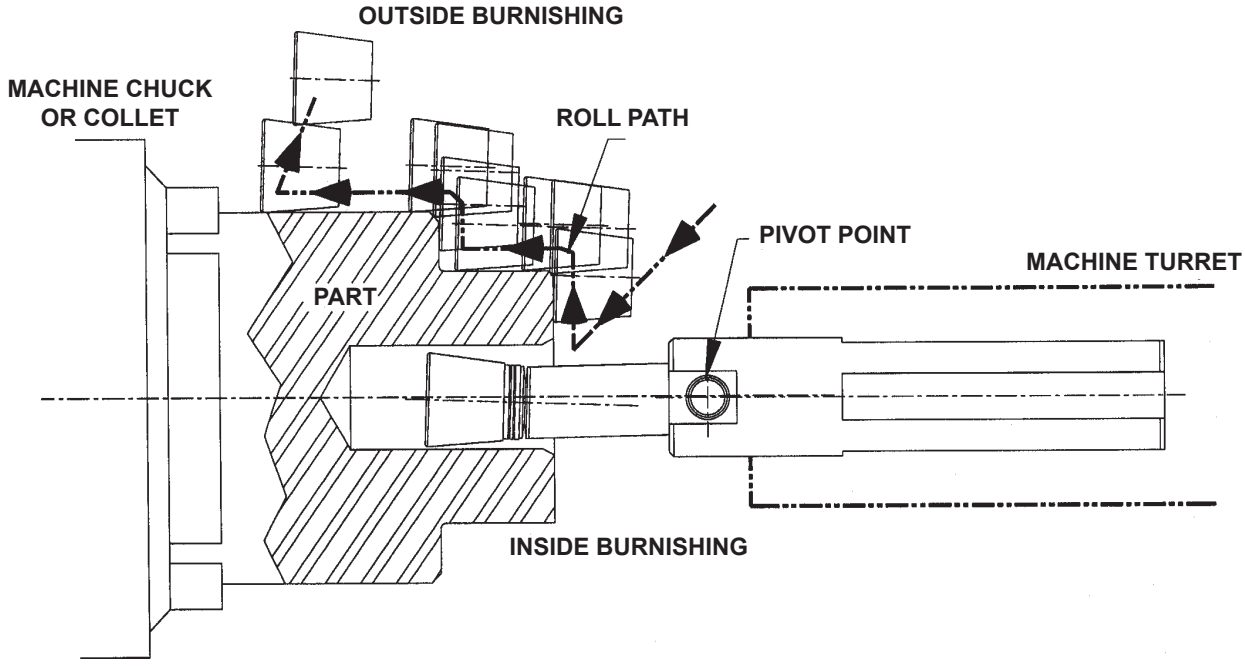
TM - 65
April '03

INSTALLATION AND OPERATING INSTRUCTIONS

ELLIOTT BORING-BAR STYLE BURNISHING TOOL



BURNISHING TOOL# S2289-00

Operating Instructions:
Part Preparation - 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 Boring-Bar Style burnishing tool can be used to burnish O.D.'s, I.D.'s and flat face surfaces.

Mounting:
The tool has a straight diameter shank with flats. The shank will slide into the machine's tool holder, allowing the tool to project for the necessary reach. Note the relationship of the pivot point to pressure point (90°).

Spring Loaded:
The Elliott Boring-Bar style burnishing tool has two series of springs for bi-directional spring loading. One series of springs is located in the shank and allows the entire head assembly to deflect when the carbide roll is pushed against an I.D. or O.D. The head assembly actually pivots on the pivot pin, located between the head assembly and the series of springs in the shank. A second series of springs is located directly behind the carbide roll. These springs allow deflection of the carbide roll when the tool is fed directly into a flat surface.

Tool Setting (I.D. and O.D. Surfaces):
Before the tool can be operated, it must be determined how much spring deflection is required and the proper feed rate. These are determined as follows:

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

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Tool Setting (cont.):
Immediately, upon full .025” deflection, feed the tool across the surface at a feed rate between .004”/.008” per revolution.

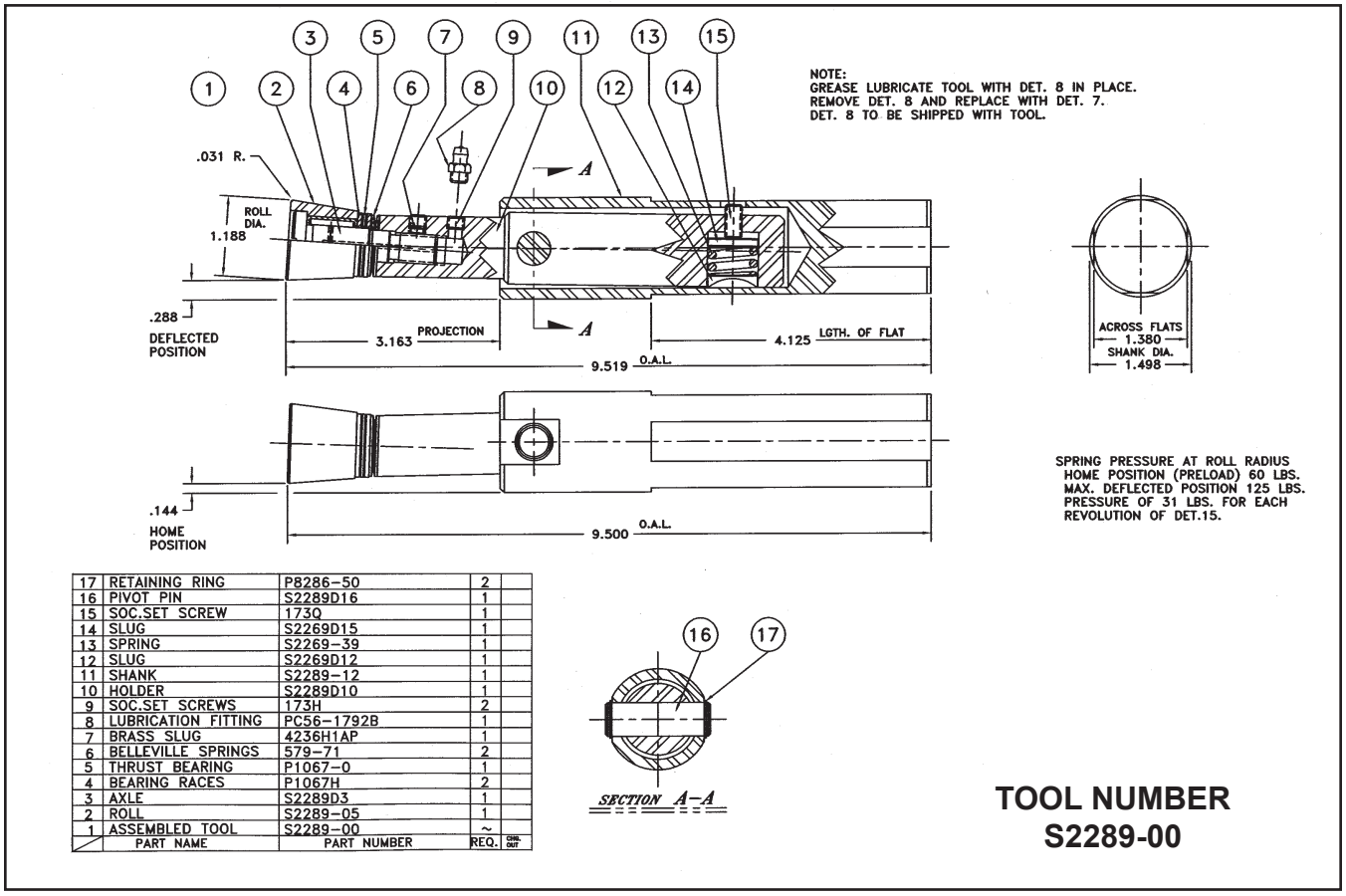
Check finish to determine if acceptable. If finish is unacceptable, there are two adjustments:

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 .100”). 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 flat face surfaces is made by feeding the tool forward until the carbide roll contacts the work surface. After the initial contact, continue forward approximately .020”. This will cause a like amount of spring deflection. Immediately, upon .020” 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. Continue to increase spring deflection in .015” increments until the proper finish is attained. Be sure not to exceed the maximum deflection allowed by the tool (approximately .060”).



	PART NAME	PART NUMBER	REQ.	CHG. OUT
17	RETAINING RING	P8286-50	2	
16	PIVOT PIN	S2289D16	1	
15	SOC.SET SCREW	173Q	1	
14	SLUG	S2269D15	1	
13	SPRING	S2269-39	1	
12	SLUG	S2269D12	1	
11	SHANK	S2289-12	1	
10	HOLDER	S2289D10	1	
9	SOC.SET SCREWS	173H	2	
8	LUBRICATION FITTING	PC56-1792B	1	
7	BRASS SLUG	4236H1AP	1	
6	BELLEVILLE SPRINGS	579-71	2	
5	THRUST BEARING	P1067-0	1	
4	BEARING RACES	P1067H	2	
3	AXLE	S2289D3	1	
2	ROLL	S2289-05	1	
1	ASSEMBLED TOOL	S2289-00	~	

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