

Procedure Name.

Edge Radius Verification / Manual Adjusting

Procedure Description.

To verify and manually adjust the position of the edge tool relative to the finish tool.

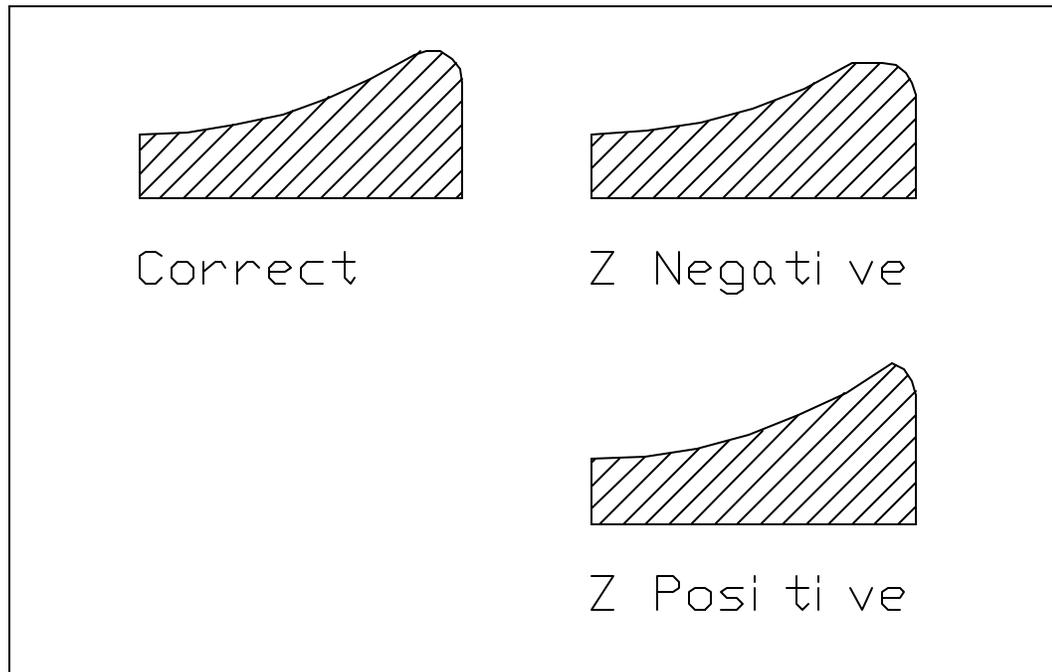
Supplementary Documentation.

None.

Procedure Details.

To maintain the correct location of the edge tool relative to the concave finish tool, both tools should be tool-set, if either or both are changed.

In some cases this may not be accurate enough, and the following symptoms may be found.



The first two factors that should be established are the edge tool radius and x position. If there are any doubt of the accuracy of the tool-set provided data, the best way to establish accurate results is to cut a convex radius with the edge tool. However if the diameter of the base curve button is correct after it has been cut by the edge tool, there is a high probability that radius and x position are correct.

All that remains is the Z position of the edge tool relative to the finish tool. If the blank is viewed in cross-section under a microscope, one of the two conditions above can be seen.

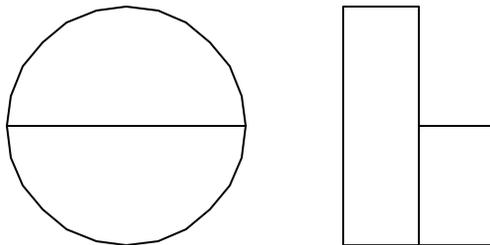
The Z negative condition suggests that the Z position of the edge tool is of too greater negative value. Small (0.005mm) positive changes to the edge tool Z position should be made until the correct shape is achieved.

The Z positive condition suggests that the Z position of the edge tool is of a smaller negative value than is required. Small (0.005mm) negative changes to the edge tool Z position should be made until the correct shape is achieved.

Notes:

For more accurate results, design a base curve that has an edge radius of 0.5mm, and is somewhat spherical, for setting and verification purposes.

To accurately view the edge and possible defects, make sure to cross section the blank. This can be done either after cutting, or a special blank can be made specifically to do this. See below.



Made from two PMMA blanks, one cut in half, and machined flat, then super glued together.