

There are two ways of measuring the Z offset for compensating for tool length. One is to set the tool setter directly on top of the material and do a measurement. The material surface is then the measured Z position minus the tool setter height. (See procedure for determining height). This is usually used when material thicknesses vary, or for operations for cleaning up the surface.

The other way is to leave the tool setter at a fixed position, and measure the tool there. It is more convenient than having to move the tool setter to the top of the material each time a tool is measured. This works well if the material thickness from piece to piece is uniform.

The distance from the bottom of the tool setter, the height of the tool setter and the thickness of the material must be known to do fixed position tool measurement. After touching off of the tool setter in the fixed position, the Z position is found. The formula for the Z value of the top of the material is :

Top of Material = Measured Z – Tool Setter Height + (Fixture Surface – Surface where fixed Tool Setter sits).

This procedure along with measuring the material thickness is used to establish the difference between the top of a fixed position tool setter, and the top of the fixture. This is done with two measurements. First measure the place where the tool setter will be placed when in a fixed position.

Tool Setter

Tool Setter

Fixture