Machining of Polyurethanes: Parting

Another lathe operation that is a little different than turning o.d.'s and facing is parting. Parting, or cut-off, is used to remove over-pour on higher hardness parts that are too hard to knife cut.

Tool that work well for parting are .060" to .100" wide with a 20 to 30 degree front rake and no top rake. A small 3/64 radius is ground into the top of the tool. Starting on the cutting edge, some side clearance is helpful. 3 to 5 degrees is all that is usually needed. See figure 2.

The proper tool, feed, and speed allow the chip to exit the cut with little resistance and heat build up. Parting yields a good surface finish and is a useful variation for facing certain urethane parts.

