



CASE STUDY 20070208S

Try Replacing “Dry” Machining With “Near Dry”

Tool Life Improvement on CNC Lathe

Sometimes using a small amount of a good quality lubricant yields big benefits. One Michigan automotive manufacturer realize overall cost savings of 41% on tooling, when the company changed from Dry Machining to “Near Dry.”

Summary

The short-term goal of the company was to improve tool performance on a “hard cut” CNC lathe. This equipment was previously using no coolant due to the nature of the machining application. The company installed a single outlet Coolubricator with a locline nozzle to evaluate in their operation.

They initially tried the standard Coolube 2210 vegetable based lubricant and averaged about 800-900 cuts per tool. They also evaluated 2210EP, formulated with a high pressure additive for harder steels and achieved a modest increase in tool life over the regular 2210, averaging 900 to 1000 cuts per tool.

Evaluation Data

Goal:	Increase tool life
Machine:	CNC Lathe
Workpiece:	HT 1040 Modified; 65 RC Spline
Req. pieces / Year:	250,000
Previous Coolant:	None
Previous Blade Life:	600
Tool Insert Cost:	\$45.00 ea.
Previous Cost / Day:	\$45.00 ea.
Previous Cost / Year	\$9,375.00

Results:

Installation of the Coolubricator and the use of 2210EP resulted in a tool insert savings of 41%. New annual insert cost was reduced by \$3,800.00 to \$5,555.00 on one machine.