



Situation

One of the larger vehicle parts manufacturer experienced extremely expensive and time consuming events associated with CNC machine tool & spindle malfunctions. The 17 machines were used to manufacture engine components chiefly supplied to the "BIG THREE" automotive assemblers

Upon consultation with the production engineer and the tool & spindle suppliers it was determined that the fluid employed in the operation did not consistently meet the methods of contaminant removal that already existed on the machine.

Thus a thorough review of the operation was implemented to ensure the manufacturing costs were brought back under control.

Solution

In order to best understand the problem and consequently implement a solution, the program engineer allowed testing to be performed on the two most troublesome tooling machines to ensure any successful results could be easily transferred to the other tooling machines with the greatest of ease

Fluid sampling studies were performed over a three month period to ensure that many different manufacturing conditions were experienced and evaluated. Fluid samples were also gathered at all stages to evaluate the efficiency & effectiveness at each stage of the contaminant removal process.

Based on the laboratory findings a solution to the problem was found that not only cured the problem on a consistent basis but also delivered it in a cost effective manner.

Tool Coolant



Value in Use

Spindle problems and machine tool breakage in conjunction with increased machine downtime/lost production approached \$100,000 per incident.

It was this issue that the organization wanted to address from the outset. The payback was immediate as the corrective action implemented on ALL 17 machines amounted to less than half of the cost of ONE breakdown associated with spindle/tooling malfunction .

Since this solution was implemented no issues have arisen with the spindles and in fact the cost of tool coolant has decreased due to less frequent change outs. Both new coolant purchases and disposal costs were also considered in this savings.