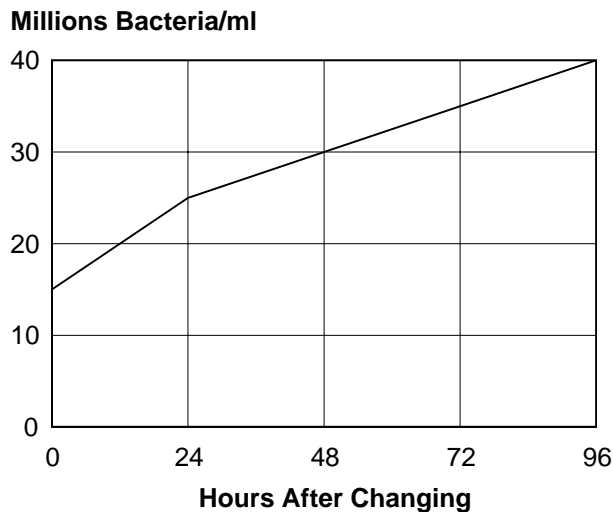




BACTERIAL GROWTH AFTER A POOR CLEANOUT

It is difficult to adequately stress the importance of thoroughly cleaning individual sumps and central systems to rid the system of detrimental odor-producing bacteria. The graph below has been plotted to show the consequences of a sump that was simply dumped and recharged.

The sump depicted in the graph below experienced bacteria-related odor problems. A bacteria count before dumping showed 3.5×10^7 /ml. The sump was drained and charged with fresh metalworking fluid. Immediately after this procedure, the bacteria count was still high, at 1.5×10^7 /ml. In just three days, the bacteria had progressed to the high pre-dump count of 3.5×10^7 /ml. Such an increase often necessitates sumps being dumped every few weeks or more, depending upon how quickly odor-related problems recur.



The best performance of a fluid is only achieved through regular, thorough cleaning of sumps and systems. Unfortunately, many individual sumps are difficult to clean due to their design. Nevertheless, we strongly recommend physically removing chips and swarf, and running a machine cleaner through the sump or system. This eliminates the breeding ground for odor-producing bacteria and helps extend the life of the fluid. Additional information about cleaning individual sumps and central systems is available in the *Technical Bulletin* entitled "Machine Cleanout Procedures."