

## Diesel Engine Machining : An Environmental Issue Turned into a Money-Saving Win

CERFA-KLEEN® 5281

### The Challenge

A large automotive diesel engine manufacturer in Indiana was having boron issues with a competitor's cleaner on their engine blocks.

Boron plated out of the cleaner, leaving a sticky residue. The operators were manually removing this residue from the parts, oftentimes cutting themselves on the sharp edges of the engine block. The boron also plated out on the rollers on the transfer line causing many hours of clean up.

Boron is a controversial raw material. It has already been banned in European formulations. As a global organization, the manufacturer is looking to rid themselves of boron where possible.



Automotive Engine Block with Sticky Residue

### The Solution

Quaker Houghton proposed switching to the boron-free CERFA-KLEEN® 5281, a biostable non-nitrited, high pressure spray cleaner with short-term in-plant rust inhibition.

It is used at ambient temperatures to dramatically reduce energy costs and the biostable technology extends sump life.

### The Product

CERFA-KLEEN® 5281 is a neutral range pH alkaline spray cleaner. It provides outstanding cleaning capability for optimal soil removal. The non-foaming formulation has no chelates, but is stabilized for use in moderately hard water. CERFA-KLEEN® 5281 works with a wide variety of alloys and works very well in barrel and vibratory cleaning, wet time saver belt grinders and may be used in all stages of multi-stage washers.

### The Benefits

- Outstanding cleaning capability for optimal soil removal
- Ability to wash using high pressures without formation of foam
- Ability to wash heavy soils at ambient temperatures without biological activity
- Incorporates corrosion inhibitors to protect from rusting, which reduces scrap rates and rework
- The cleaner and rust preventive within CERFA-KLEEN® 5281 do not leave any residual residues or films

As a result of switching to CERFA-KLEEN® 5281 all boron issues have been eliminated! CERFA-KLEEN® 5281 costs \$4 per gallon more than the original solution but **increases the bath life by 50% for a net savings of \$20,000 per year.**

The sticky residue is gone, reducing health and safety concerns and labor costs for the operators who had to remove it.

The part is much cleaner and the rust preventive within CERFA-KLEEN® 5281 provides rust protection from the point when blocks and heads are washed until they are assembled, which could be multiple weeks.



Industrial Spray Cleaner Machine