

# LAC 945 and DAC 900

CLEANER

## CUSTOMER: HEAVY MACHINERY AND VEHICLES MANUFACTURER

**Industry/Market:** Industrial

**Product Type:** Cleaner

**Product Number:** 4801800000 (LAC 945), 4800600000 (DAC 900)

**Description of Environment:** Reman components disassembly and cleaning

**Volume Used:** 5,000 gallons per year

**Date of Use:** 2012 to present

**Documented Cost Savings:** \$45,000 savings from original chemistry, reduced rewash rate from 37% to 14%

### ▷ DESCRIPTION OF PROBLEM

For years Exhaust Gas Recirculation systems (EGR) have been used in diesel engines to reduce Nitrogen Oxide (NOx) content of exhaust gas. Although we all agree that helping the environment is a benefit, these systems are particularly hard on EGR exhaust coolers and turbocharger units depositing a hard tenacious carbon coating, greatly affecting the performance of these critical components. These components are intricately engineered with a mixture of cast iron, steel, aluminum and yellow metals and over time must be pulled from the vehicle and sent back to a "Reman" plant.

At the time, this Reman plant had four heated Agi-Lift immersion washers using 100% of a commodity caustic cleaner which was not cleaning effectively and had to be changed out every two to three days. The caustic cleaner was especially aggressive to Zinc and Aluminum. Forty percent of the parts, moreover, had to be rewash. Change out of the 80 gallon system required an entire shift to heat the batch back to a target temperature of 155°F. These issues greatly reduced plant efficiency, morale and quality.

### ▷ SOLUTION

Our team quickly identified the gaps at this plant. We consulted with our technical team who actually received the used parts and began empirical benchmarking of blends of cleaner building blocks to find an optimal blend to clean this tenacious dirt efficiently. A new product was conceived, LAC (Liquid Alkaline Cleaner) 945. Although it was more expensive, the customer was willing to trial and compare overall benefits of purchasing a concentrated product in order to fine tune performance. Immediate benefits were realized in a 30 minute clean cycle which completely removed the carbon at 17% concentration. Not stopping there, we incorporated a new tool, DAC (Detergent Additive Concentrate) 900 at a 2 – 2.5%. This greatly boosted the activity of the LAC 945 cleaner bath, doubled the length of bath change out, and greatly reduced the rewash rate three-fold.

### ▷ CUSTOMER TESTIMONIAL

Senior management at the facility has recognized this success to the point that Chemtool has been invited to participate in more projects to offer even more value.



Photo of the dirt dispersing abilities of the LAC 945 (left) at 15% to the competitive fluid at 100%.