

CASE STUDY



TWO STAGE WASHING WITH AIR KNIFE DRYING

QUAKERCLEAN® 680 VDA AND QUAKERCLEAN® 624 MPC

CHALLENGES

A global manufacturer of large diesel engine blocks was experiencing issues in their engine block rinse and wash tanks and was having difficulty getting good soil removal and rust protection. The customer needed a product that would meet the following requirements:

- » Must provide corrosion protection
- » Provide Improved soil removal
- » Must dry quickly and leave parts streak free and ready for assembly

THE SOLUTION

The engine blocks arrived as “cubed” castings with an oily, wax rust inhibitor and were washed in a large spray chamber fed by a 3,000 gallon wash tank. Once washed, the blocks were rinsed in the same chamber being fed from an 800 gallon rinse tank. Following the rinse tank the blocks were dried using an air knife.

Quaker process engineers assessed the customer's challenges and introduced QUAKERCLEAN® 624 MPC to the first stage wash tank and QUAKERCLEAN® 680 VDA to the rinse tank. QUAKERCLEAN® 624 MPC was selected for the exceptional soil removal of the wax rust inhibitor and QUAKERCLEAN® 680 VDA provided rapid drying, rust protection, and left an undetectable residue on the part. By using both Quaker products in the two stage washer, the customer was able to realize the following results:

- » Exceptional soil removal
- » Excellent corrosion protection performance
- » Rapid drying with an imperceptible residue

PROCESS AND EQUIPMENT

Part	Large diesel engine blocks
Material	Cast Iron
Operation	Two stage rotisserie washer with air knife drying
Temperature	Ambient
Pressure	150 psi
Product concentration	3 - 5%
Water quality	RO water

THE PRODUCT

QUAKERCLEAN® 680 VDA is formulated to dry rapidly and is excellent for any application that requires minimal residue after the final wash process. The product cleans light to moderate soil loads and protects ferrous surfaces while drying uniformly leaving an imperceptible thin film of corrosion protection that can provide up to 60 days protection on metal surfaces when handled properly in controlled applications. QUAKERCLEAN® 680 VDA's unique chemical engineering resists foaming even at high pressures and has good oil splitting characteristics to extend bath life, reduce consumption and improve overall operating costs.

THE EXPERTISE

Metalworking lubricants represent a very minor part of the costs in a metalworking process, typically less than 1%. This case illustrates the importance of correct fluid selection. The impact of the fluid can be a multiple of its costs, making the price of a metalworking fluid insignificant. That is why Quaker focuses on developing fluids with the highest performance without compromise, fluids that sharpen your competitive edge.