

How Jet-Hot helped the leading diesel manufacturer reclaim a fivefold increase in engine life



THE PROBLEM

When the EPA implemented new emission standards, Cummins, a world-leading manufacturer and distributor of fuel systems and controls, discovered they had a problem.

The new EGR systems they'd developed to meet the EPA standards were resulting in a noticeable increase in the aluminum oxide build-up in the oil, which was causing rapid, premature wear in oil pumps and bearings, and on cylinder walls. Engine failure was sometimes occurring within 200,000 miles.



LOOKING FOR SOLUTIONS

Cummins needed to find a way to meet the EPA's standards without sacrificing engine life in the process.

Using stainless steel alloy instead would be much heavier, far harder to machine, and raise raw material

costs by as much as four times. The additional weight would also reduce the vehicle payload capacity.

Engineering contacts within professional racing suggested consulting Jet-Hot.

Cummins internal technical analysis indicated the root cause was acidic attack on the aluminum base metal.

They asked Jet-Hot whether it was possible to develop and implement a protective coating for their aluminum engine parts.



RIGOROUS TESTING

In conjunction with Cummins, Jet-Hot developed a standard to performance test coatings. Cummins then rigorously tested hundreds of coating combinations while Jet-Hot's R&D team provided numerous coatings until a solution was identified.

Feedback revealed that Jet-Hot's best-performing coating reclaimed engine

MTBF from around 200,000 miles to more than one million miles — a fivefold increase in engine life.

Pump, bearing, and cylinder wall wear were all reduced, while EPA standards were all maintained.



A LONG-STANDING BUSINESS RELATIONSHIP

"Jet-Hot's commitment to Cummins' success through the years has allowed both companies to grow," says Jet-Hot Senior Engineer Dave Burton.

"Working with design engineers, purchasing, Cummins Tier I suppliers, and the assembly plants directly provides an efficient and responsive relationship."

**FOR MORE INFORMATION CALL
(800) 432-3379**



(800) 432-3379



info@jet-hot.com



www.jet-hot.com