



Oronite

video transcript

## PCFLex ADDvantage™ PCMO field testing video

### **Mark Sztenderowicz, manager, global automotive product development**

At Oronite, we're always looking to provide innovative and field-proven PCMO technology. With increasing demands on lubricants, future engine oils will need to address a broad range of performance criteria. Oronite's field-testing program is one way of demonstrating how Oronite's PCMO technology can stand up against real-world conditions. It's also an important element of the overall PCFLex ADDvantage we strive to deliver in applying innovative technology, exceptional reliability, and enduring relationships to our passenger-car products. At Oronite, we utilize an approach to field testing which thoroughly evaluates the oils' performance in harsh, real-world conditions.

### **Rich Frakes, general manager, Desert Cab, Las Vegas, NV**

We put anywhere from 7,500 to 10,000 miles a month on the car, so it's extreme to where we're always running, always running.

### **George Balaban, owner & president, Desert Cab, Las Vegas, NV**

They're idling a lot, because we need to have the cars cool inside for the passengers. So that idle time, all the heat, it's just a gigantic challenge with overheating. In Las Vegas, we have these extremes. I mean, in the winter it's cold, so the heaters need to be working in the cars, and you wouldn't think that in the desert, but it gets really cold in the winter. And then, obviously, in the summer is the real challenge.

### **Jimmy Pitta, automotive field test engineer, Americas region**

So we chose Desert Cab because they could put a lot of miles on in a short duration of time and they perform proper and regular maintenance.

### **Kenny Armstrong, test program manager, Desert Cab, Las Vegas, NV**

Our maintenance schedules here at Desert Cab are actually very strict. We input mileages every day so that mileages are always up to date and accurate. We don't just generalize things. Each car is specific, each car has different schedules. And that ties in quite nicely with the Oronite Field Test Plan.

### **Mahboob Hosseini, automotive research engineer & formulator**

At Oronite, we apply an engineering design approach for our field testing. We typically run multiple vehicles on each engine-oil formulation to have confidence that our performance test we are seeing is the real performance of that engine oil, that we are interested in that, on that vehicle under those conditions.

### **Jimmy Pitta**

When we do our field tests there are some main items that we look at -- the valve train, the cam, the crank, and then the rockers and rollers. We also take a look at the pistons, liners, and rings.

**Mark Sztenderowicz**

Once testing is complete, extensive tear-downs of the engines are conducted on location to examine engine parts using industry-standard measurement techniques to measure the performance of our additives.

**Jimmy Pitta**

Today we're looking at a four-cylinder engine?

**Kenny Armstrong**

Yes, we ran it for 100,000 miles in Las Vegas. Our testers are 24-hour cars; they are always on the go.

**Jimmy Pitta**

Right.

**Kenny Armstrong**

Temperatures reach 110-plus in the summer. Really severe service for a car, so I am really quite interested to see how these engines turned out.

**Jimmy Pitta**

Yes, so you know how we like to do it at Oronite. So we run our tests for 100,000 miles or more. We bring them in and we open them up once we are off-test.

**Kenny Armstrong**

Yeah.

**Jimmy Pitta**

So we use an industry-standard rating method. So let's take a look at the parts. Take a look at the cam itself; so this is actually that part in here rotating around. So there's no wear where the cradles are. And then you've got these rocker rollers that are rolling on here, and there's no wear on these loads. As we move down, we start to look at -- let's look at these bearings. As you can see, they still have the imprint from the manufacturer on here.

**Kenny Armstrong**

Stamped numbers, yep.

**Jimmy Pitta**

For 100,000 miles. We talk about extending the life of the engine or extending out our tests to 200,000 or 300,00. We definitely can do that with this engine.

**Mark Sztenderowicz**

At Oronite, we take the safety and reliability of our products very seriously. We believe that robust field testing of our technology is not an option, but a necessity. It is critical in our product development and assessment to have proven and measurable data that supports our products. To learn more about our product testing and the value we can bring to passenger-car products through our PCFlex ADDvantage, please contact your local Oronite representative.