



Oronite

video transcript

innovative additive solutions for AEO

Narrator

Automotive engine oils – an increasingly complex and challenging market for world-class lubricants manufacturers. At Chevron Oronite we leverage our position as a leading additive supplier to deliver trusted solutions for today's and tomorrow's automotive engine lubricants.

Our strategic position in the industry and industry committees helps us to provide insights to create value for our customers. We capitalize on our large industry network. And work with various industry organizations.

Our OEM liaison team stays in close contact with leading OEMs to follow constantly evolving specifications and technology. This in turn helps us anticipate market needs and offer our customers insights into the trends and market strivers – helping them develop solutions with a forward-thinking approach.

Gary Parsons, global OEM and industry liaison manager, automotive engine oils

Recent examples include two new tests being developed for GF-6. First, we worked with the Japanese Automotive Manufacturers Association in development of the Toyota valve train wear test. And second, we've worked with Chrysler and others in the Chrysler oxidation and deposit tests. This has given us extensive insight and helped to reinforce our position as a trusted authority in passenger care motor oils.

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The commitment, the expertise, and the know-how of Oronite's products and technology team allow us to develop quality and innovative solutions that help meet our customers and end-users needs.

Teri Crosby, global product line manager, automotive engine oils

Over 20 percent of our workforce is dedicated to technology. And we capitalize on nearly 100 years of additive formulation innovation. At Oronite, innovation is a continual process with over 400 patent families in place and new patents being added yearly. In fact, to address increasing product demands, we have made record investments in our R & D activities over the last few years.

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Our global network of R & D assets is expanding throughout the world. A collection of world-class research and testing facilities, each with unique strengths and expertise to address regional and global market needs.

With new engine designs and sophisticated after-treatment technologies continuing to emerge, enhanced components and formulating expertise are required to obtain high performance and robust engine oils. Chevron Oronite develops innovative quality and proven products that can help our customers differentiate their products in the marketplace. New components are developed and manufactured with high quality standards to help ensure timely delivery, performance reliability, and speed to market of the additive package.

Chevron Oronite initiatives to develop safe and sustainable products started the design stage and continue throughout the product lifecycle. Each product undergoes a comprehensive and wide-ranging slate of testing and analysis. Appetite studies help us better understand new technologies or component interaction, find possible synergies, and define the need for developing new components.

A series of bench tests help evaluate product performance, ensure long-term compatibility, or determine the optimal dosage. New screening tests are developed and statistical design of experiments and modeling are applied, helping

accelerate the development process. Engine tests are performed in house or with the help of external laboratories as quickly and cost effectively as possible, to obtain full OEM approvals.

Our extensive engine know-how helps in the evaluation of oil performance. Field tests allow the evaluation of the finished oil in the real-world conditions and help provide the effectiveness of our additive packages. Finally, as part of the qualification process, comprehensive candidate data packages, as well as approval letters, are prepared to provide customers with a full additive performance demonstration.

Jeroen van Leeuwen, R&D manager, automotive engine oils

Our formulations not only reflect the finished oil physical and chemical requirements but are aligned with cost and dosage targets and provide base oil flexibility.

Narrator

Technology is the lifeblood of our business. Thanks to our enduring relationships with customers, OEMs, and other industry stakeholders, we develop highly effective and reliable components and additive packages.

Available globally, thanks to our robust global supply network, they help ensure the protection and cleanliness that today's engines require to run smoothly. Chevron Oronite capitalizes on years of technological expertise, innovation, and field experience to create trusted additive solutions.