

Automotive Research Offers Real-Time Oil Consumption Testing Capabilities

Automotive Research now offers our customers a revolutionary way of capturing real-time lubricant oil consumption measurements. The testing is conducted in conjunction with Da Vinci Emissions Services, a company specializing in providing real-time oil consumption data.

The measurement principle is based on the sulfur-trace technique. An emissions sample is taken from the exhaust gas stream and the concentration of the sulfur species is measured utilizing a proprietary measurement system deemed Da Vinci Lubricant Oil Consumption (abbreviated DALOC). Using zero-sulfur fuel and sulfur-containing oil, the oil consumption can be calculated on a second-to-second basis. This technique is completely harmless, so a prototype engine does not have to be disposed of after test. It provides true real-time resolution and it has proven to be highly repeatable and accurate.

The DALOC technique can be used in a variety of testing applications, including gasoline, diesel, and natural gas fueled engines. Furthermore, it can be applied for investigation of detailed oil consumption mechanisms within the engine, such as real-time steady-state and transient mapping of:

- Total engine oil consumption
- Component oil consumption
- Powercylinder
- Turbocharger
- Valve stem seal
- Crankcase ventilation oil consumption
- Individual cylinder oil consumption

Da Vinci Emissions Services can solve excessive lubricant oil consumption issues by evaluating component solutions via comparison testing.

Experience has shown that oil consumption can be reduced by 30% or more using this technology and comparing various conventional component technologies that may be cost effectively implemented into the manufacturing process.



Customers benefit from this testing in numerous ways since it:

- Reduces the cost of any exhaust treatment system, such as a diesel particulate filter, NOx catalyst, three-way-catalyst, or oxidation catalyst
- Prevents costly prototype engine disposal, as is the case when using the radioactive approach for measuring oil consumption
- Improves emissions certification performance, since unburned oil consumption is ultimately a particulate emission
- Reduces vehicle down-time for oil changes

“Inclusion of this novel offering proves our commitment to offering our valued customers an increasingly one-stop service,” says John Glaser, General Manager. For more information regarding real-time oil consumption testing services conducted at Intertek, please contact Dean Schoppe at dean.schoppe@intertek.com or (210) 523-4605. For more information regarding Da Vinci Emissions Services, please refer to the web-site, www.davinci-limited.com.