Fuel Analysis

Fuel Analysis

Testing and Evaluation

Fuel analysis can indicate causes for power loss, filter clogging, or poor injector performance. Fluid Life's fuel testing services enable our customers to verify fuel quality and prevent potential causes of engine damage resulting from fuel sources.

Every set of sample results is reviewed by a highly trained senior lab technician before the results are released to ensure strict quality assurance on every test. Contact your Regional Account Manager for a complete list of services.

Fuel Analysis Tests

Basic Fuel
A microscopic analysis of your diesel fuel sample that looks for gross contamination including qualitative sediment, water, bacteria and varnish (diesel fuel only).

Distillation Range
This test determines the fuel's boiling point, which is useful in determining if gasoline and diesel are mixed as well as verifying proper seasonal fuel applications (ASTM* D86). Minimum 250ml sample required.

Flash Point
The Closed Cup method(ASTM D93, diesel fuel only).

Fuel Sediment
A quantitative look at gross contamination in your fuel sample expressed in mg/L.
1 litre sample required.

*ASTM=American Society for Testing and Materials

Colour Test
A comparison of your fuel's colour to an ASTM D1500 colour chart.

Moisture
The percentage of water in your fuel sample (Karl Fischer ASTM D6304).

Cloud Point
A measure of the temperature where wax crystals first start to form in your diesel fuel sample according to ASTM D2500. Common indicator of the minimum operating temperature of the fuel to prevent plugging of the fuel filters.

Pour Point
The temperature at which your fuel sample solidifies according to ASTM D97. Generally less important that the Cloud Point from a service point of view, but may be important in terms of storage and pumping of the fuel.

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Fuel Analysis Tests (Cont.)

Density
Verifies the density of a fuel sample according to ASTM D4052.

Cetane Index
This is an indicator of the ignition quality of the raw diesel fuel as per ASTM D4737. This calculation is derived from tests including the density and distillation results. (Note: This index may not be applicable to fuels that contain cetane improver additives and may vary significantly from the actual Cetane Number.)

Cetane Rating
This test as per ASTM D613, uses a test motor and requires 4 litres of sample.

Octane Number
This analysis will provide you with an octane number according to both ASTM D2699 (Research Octane Number - RON) and ASTM D2700 (Motor Octane Number - MON). In Canada and the US, the Anti-knock Index (AKI) or Road Octane Number (RdON) reported at the pump (aka Pump Octane Number - PON) is the average of the RON and MON.
4 litre sample required.

Lubricity (Diesel Fuel)
The lubricity of the diesel fuel is evaluated using the ASTM D6079, HFRR (High Frequency Reciprocating Rig) method.