

# FUEL TEST REPORTS

Test Criteria	Meaning	Significance
Appearance (‘Clear & Bright’ test)	<p>A visual check to see if the sample is free from visible particles, cloudy or discoloured.</p> <p>The Clear &amp; Bright test is subjective and results can be affected by environmental conditions such as the ambient light when the test is being conducted. It is difficult to compare results from one laboratory to another. It is, nevertheless, a widely accepted test.</p>	Medium
Water content	<p>Water content should be as low as possible. It is one of the main contaminants that causes problems in diesel fuel.</p> <p>Water content is usually reported in parts per million (ppm). A reading below 200ppm is acceptable according to the Worldwide Fuel Charter.</p>	High
Particulates	<p>Particulate contamination should be as low as possible. It is a major cause of engine failures in diesel equipment.</p> <p>Particulate contamination is reported using the ISO4406 system which includes three numbers. 18/16/13 is acceptable according to the Worldwide Fuel Charter. Higher numbers indicate more contamination.</p> <p>Being one number above the standard (i.e. 19/17/14) is often considered acceptable. Readings higher than that represent a danger to equipment.</p>	High
Fuel composition	<p>Detailed fuel tests might also report on the fuel’s composition. This would list the presence of elements such as silicon, sulphur, copper, iron, lead, tin, barium, calcium, magnesium, molybdenum, phosphorous and zinc.</p> <p>The presence of these elements in fuel does not represent a problem for engines because fuel spends so little time in the engine. Their presence in lubricants might indicate other sorts of engine problem.</p>	Low
FAME content	<p>Diesel is meant to contain 7% FAME in the UK and EU. FAME is the biological element that reduces diesel’s environmental impact.</p> <p>A lower FAME content will not impede the engine’s performance although it may fail emissions tests.</p> <p>A higher FAME content will not impede the performance of most modern engines. They are typically designed to work with up to 20% FAME although you should check with your manufacturer.</p>	Medium

For further details, please visit:

[IPU.CO.UK/FUEL](http://IPU.CO.UK/FUEL)

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