

Flash Point Tests in the In-Service Lubricants Industry

Flash point is a simple and quick screening test that can identify lubricant-fuel dilution and whether an engine lubricant remains within safe operational specifications. A drop in crankcase oil flash point typically indicates that the oil has become diluted with fuel.

Flash point tests are an important part of the oil analysis program as a relationship exists between a lubricant's flash point and the percentage of diluted fuel that it may contain, this data allows progressive assessment of lubrication properties inside an engine. Application-specific graphical data based on the test protocol (test method), the specific lubricant type (brand/grade) and the type of engine fuel allows considerable precision in translating a drop in flash point to percent fuel dilution.



Lubricants - Primary Flash Point Test Methods		Mineral - insulating oils	Basestocks	Lubricating oils	Hydraulic oils
ASTM D3278	Small scale - closed cup	•	•	•	•
ASTM D3828	Small scale - closed cup	•	•	•	•
ASTM D7236	Small scale - ramp test	•	•	•	•
ASTM D93	Pensky Martens	•	•	•	•
ASTM D92	Cleveland	•	•	•	•



Setaflash - the preferred test method

The Setaflash instrument requires just 2ml of sample which enables the target temperature to be reached quickly, typically within 1-2 minutes. An ignitor is then applied to check for a flash which, if found, is a good indicator of fuel dilution. Many traditional flash point tests require a much larger volume of sample (typically 70-80ml) and also take 30 minutes or longer to perform, so most operators opt for the Setaflash Small Scale Closed Cup test - ASTM D3828 which is fully specified for lubricant testing.

The Setaflash instrument is a simple and cost effective test that can be undertaken on-site with minimum operator skill. Results assist those responsible for analysis of in-service lubricant properties and also by providing a strategic exception test that is used to confirm and diagnose occasional non-conforming conditions that can be flagged by routine tests.

Further information about Setaflash small scale flash point testing can be found at www.stanhope-seta.co.uk/small-scale-flashpoint-testing.asp or by scanning the QR code below.

