Lubricants Testing Services

AGAT Laboratories

Fuel Analysis

Equipment Reliability and Lubricants Testing Services

Fuel contamination or quality problems will dramatically affect the operation of fleet, transportation and construction equipment.

Contamination analysis includes distillation and flash point and should be done when there is any suspicion or operational evidence of fuel contamination for either diesel or gasoline engines.

When fuel quality is questionable, such as sudden power loss, increased exhaust smoke or other unusual engine operating conditions, the analysis includes cetane index for diesel fuel and octane rating for gasoline.

The diesel fuel analysis should include the following:

- Density
- Distillation
- Cetane Index
- Flash Point
- Water Content
- Particulate Content

Recommended Analysis Package 30-489

Diesel engine over fueling will result from leaking injectors, low turbo boost pressure, restricted air intake or excessive idling.

Over fueling will cause high soot levels in engine oil which in turn will cause component failures.

Carbon Soot restricted oil flow to this turbo-charger bearing.

The gasoline fuel analysis should include the following:

- Density
- Distillation
- Water Content
- Particulate Content

Recommended Analysis Package 30-488

A Note on Unusual Diesel Fuel System Problem Diagnosis

A particular problem related to over-fueling is fuel line erosion. Fuel lines are subjected to fuel flow of high pressure and velocity. Under certain conditions, the high fuel velocity can cause erosion of the interior of the fuel lines. These tiny metal particles will erode fuel injectors creating tiny holes in the injector resulting in more fuel leakage and over-fueling (See image below).

For more information please contact info@agatlabs.com