



ISP Fuel Systems



Account Information	Component Information	Sample Information
Company Name:	Component ID:	Sampled:
Address:	Fuel Type:	Completed:
Comments:		

Test Results				
Test Method	Test Name	Result	Min	Max
ASTM D2709	Water and Sediment (%)			0.05
ASTM D93	Flash Point (°F)		125.6	
ASTM D5773	Cloud Point (°F)			
EN 14078	Biodiesel Content (%)			5.0
MICRO-ORGANISM CULTURE	Bacteria (pos/neg)			
MICRO-ORGANISM CULTURE	Fungi/Mold (pos/neg)			

ISO 4406: Particle Count (particles/mL)	Result	Max
ISO Cleanliness Code		18/16/13
>4µm		2500 p/mL
>6µm		640 p/mL
>14µm		80 p/mL

ASTM D4176: Appearance	Middle Sample	Bottom Sample
Clear & Bright (Pass/Fail)		
Free Water (Pass/Fail)		
Particulate (Pass/Fail)		
Haze Rating (#1-#6)		

Definitions

The following tests have been specifically chosen to determine fuel quality in long-term storage with emphasis on filter/fuel line plugging, safe handling, and clean fuel housekeeping.

- Water & Sediment** – The amount of water suspended or emulsified in the fuel. Water can promote microbial growth, corrode metals, clog filters, and blow injector tips.
- Flash Point** – The temperature at which diesel fuel will ignite when an ignition source is introduced. The lower the flashpoint temperature, the easier it is to ignite the air if an ignition source is present. The higher the flashpoint, the safer the material is to handle.
- Cloud Point** - the temperature below which wax in diesel forms a cloudy appearance. The presence of solidified waxes thickens the oil and clogs fuel filters and injectors in engines.
- Biodiesel Content** - Standard method evaluation for biodiesel determination in diesel blends. Max is 5% for new deliveries, however, will not harm generators until upwards of 20%.
- Microbial Growth** – The presence of microbial growth is commonly found when water is present in the tank. Algae, fungi, and mold can multiply quickly and clog filters and fuel lines.
- Bottom Visual Sample** – Visual sample to determine the cleanliness of the tanks bottom. Water at the bottom of the tank can lead to microbial growth throughout the entire tank. If water builds up over time it can eventually reach the generator suction line.
- Particle Count** – Cleanliness test to determine the amount and size of particles within a range. Diesel OEM desired fuel cleanliness is 18/16/13.
- Haze Rating** – Visual inspection of a sample to determine haziness or clarity on a scale from 1-6. A haze rating of #1 means the fuel is clear and bright with a #6 meaning very thick or dark haze.