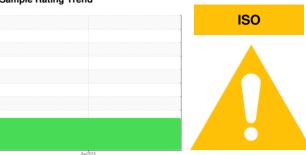


FUEL REPORT

Sample Rating Trend



Machine Id

Morningside Raleigh Component Bottom Diesel Fuel

No.2 DIESEL FUEL (ULTRALOW SULPHUR) (--- GAL)

DIAGNOSIS

Recommendation

We advise that you filter this fluid before use. All laboratory tests indicate that this sample meets specifications for No.2 ultra-low-sulfur diesel fuel.

All metal levels are normal indicating no corrosion in the system.

Contaminants

There is a high amount of particulates present in the fuel. The water content is negligible. There is no bacteria or fungus (yeast and/or mold) indicated in the sample.

Fuel Condition

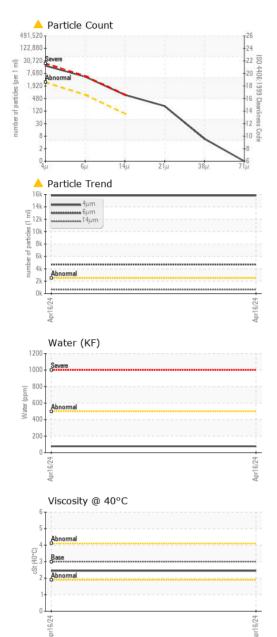
Sulfur value derived by ASTM D5453 method for ULSD validation. Sulfur level is acceptable for ULSD specification.

SAMPLE INFORMATION method limit/base current history1 history1 Sample Number Client Info WC0858841 Sample Date Client Info 16 Apr 2024 Machine Age hrs Client Info 84 Sample Status ABNORMAL PHYSICAL PROPERTIES method limit/base current history1 history1 ASTM Color scalar *ASTM D1500 L5.5 Visc @ 40°C cSt ASTM D445 3.0 2.45 SULFUR CONTENT method limit/base current history1 history1 history1 Sulfur (UVF) ppm ASTM D5453 8 CONTAMINANTS method limit/base current history1 history1	ry2
Sample Date Client Info 16 Apr 2024 Machine Age hrs Client Info 84 Sample Status ABNORMAL PHYSICAL PROPERTIES method limit/base current history1 history1 ASTM Color scalar *ASTM D1500 L5.5 Visc @ 40°C cSt ASTM D445 3.0 2.45 SULFUR CONTENT method limit/base current history1 history Sulfur ppm ASTM D5185m 10 0 Sulfur (UVF) ppm ASTM D5453 8	
Sample Date Client Info 16 Apr 2024 Machine Age hrs Client Info 84 Sample Status ABNORMAL PHYSICAL PROPERTIES method limit/base current history1 history1 ASTM Color scalar *ASTM D1500 L5.5 Visc @ 40°C cSt ASTM D445 3.0 2.45 SULFUR CONTENT method limit/base current history1 history Sulfur ppm ASTM D5185m 10 0 Sulfur (UVF) ppm ASTM D5453 8	
Sample Status ABNORMAL PHYSICAL PROPERTIES method limit/base current history1 history ASTM Color scalar *ASTM D1500 L5.5 Visc @ 40°C cSt ASTM D445 3.0 2.45 SULFUR CONTENT method limit/base current history1 history1 history1 Sulfur ppm ASTM D5185m 10 0 Sulfur (UVF) ppm ASTM D5453 8	
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SULFUR CONTENT method limit/base current history1 history1 Sulfur ppm ASTM D5185m 10 0 Sulfur (UVF) ppm ASTM D5453 8	ry2
Sulfur ppm ASTM D5185m 10 0 Sulfur (UVF) ppm ASTM D5453 8	ry2
Sulfur (UVF) ppm ASTM D5453 8	
CONTAMINANTS method limit/base current history1 history	
	ry2
Silicon ppm ASTM D5185m <1.0 0	
Sodium ppm ASTM D5185m < 0.1 0	
Potassium ppm ASTM D5185m < 0.1	
Water % ASTM D6304 <0.05 0.007	
ppm Water	
% Gasoline % *In-House <0.50 0.0	
% Biodiesel % *In-House <20.0 3.7	
FLUID CLEANLINESS method limit/base current history1 history1	ry2
Particles >4μm ASTM D7647 >2500 Δ 15820	
Particles >6μm ASTM D7647 >640 ▲ 4700	
Particles >14μm ASTM D7647 >80 Δ 635	
Particles >21μm ASTM D7647 >20 184	
Particles >38μm ASTM D7647 >4 5 Particles >71μm ASTM D7647 >3 0	
Particles >71µm	
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	0
HEAVY METALS method limit/base current history1 history1	ry2
Aluminum ppm ASTM D5185m <0.1 0	
Nickel ppm ASTM D5185m <0.1	
Vanadium ppm ASTM D5185m <0.1	
Calcium ppm ASTM D5185m <0.1 0	
Magnesium ppm ASTM D5185m <0.1 0	
Phosphorus ppm ASTM D5185m <0.1 0	
Zinc ppm ASTM D5185m < 0.1 0	
SAMPLE IMAGES method limit/base current history1 history1	ry2
Color no image no image	ge
Bottom no image no image supported By: BOBER I MCAR	

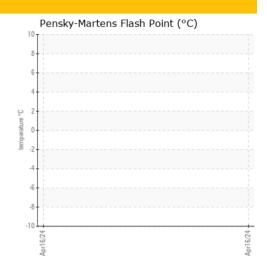
Submitted By: ROBERT MCARTHUR



FUEL REPORT



GRAPHS





Certificate 12367

Report Id: BITCAR [WUSCAR] 06159973 (Generated: 05/06/2024 21:57:11) Rev: 2

Laboratory

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. Lab Number : 06159973

: WC0858841 Unique Number : 10995396

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Received : 24 Apr 2024 **Tested** Diagnosed

: 06 May 2024

: 06 May 2024 - Doug Bogart **Test Package**: DF-5 (Additional Tests: BoilingPoint, COOL, Screen) To discuss this sample report, contact Customer Service at 1-800-237-1369.

MORRISVILLE, NC US 27560 Contact: ROBERT MCARTHUR rmcarthur@bittingelectric.com T: (919)467-9417

ALTERNATIVE POWER

1000 NORTHGATE CT

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: ROBERT MCARTHUR