



# FUEL REPORT

Sample Rating Trend



ISO



Machine Id  
**MW2 BPS - 8179 US WHY 421 S**

Component  
**Diesel Fuel**  
Fluid

{not provided} (--- GAL)

## DIAGNOSIS

### Recommendation

Recommend pre-filtering before use. All laboratory tests indicate that this sample meets specifications for No.2 ultra-low-sulfur diesel fuel.

### Corrosion

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

### Contaminants

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

### 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	history2
Sample Number	Client Info			<b>WC0798106</b>	---	---
Sample Date	Client Info			<b>08 Mar 2023</b>	---	---
Machine Age	hrs	Client Info		<b>0</b>	---	---
Sample Status				<b>ABNORMAL</b>	---	---

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298		<b>0.843</b>	---	---
Fuel Color	text	*Visual Screen		<b>Red</b>	---	---
ASTM Color	scalar	*ASTM D1500		<b>L3.5</b>	---	---
Visc @ 40°C	cSt	ASTM D445		<b>2.46</b>	---	---
Pensky-Martens Flash Point	°C	*PMCC Calculated		<b>58</b>	---	---

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m		<b>0</b>	---	---
Sulfur (UVF)	ppm	ASTM D5453		<b>13</b>	---	---

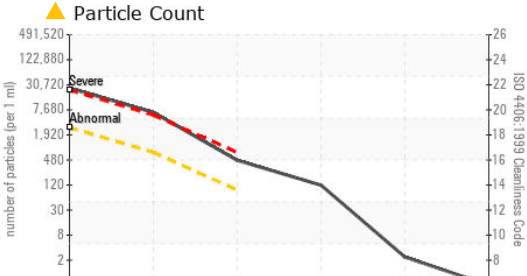
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		<b>163</b>	---	---
5% Distillation Point	°C	ASTM D86		<b>188</b>	---	---
10% Distill Point	°C	ASTM D86		<b>199</b>	---	---
15% Distillation Point	°C	ASTM D86		<b>209</b>	---	---
20% Distill Point	°C	ASTM D86		<b>215</b>	---	---
30% Distill Point	°C	ASTM D86		<b>232</b>	---	---
40% Distill Point	°C	ASTM D86		<b>247</b>	---	---
50% Distill Point	°C	ASTM D86		<b>261</b>	---	---
60% Distill Point	°C	ASTM D86		<b>276</b>	---	---
70% Distill Point	°C	ASTM D86		<b>291</b>	---	---
80% Distill Point	°C	ASTM D86		<b>308</b>	---	---
85% Distillation Point	°C	ASTM D86		<b>317</b>	---	---
90% Distill Point	°C	ASTM D86		<b>328</b>	---	---
95% Distillation Point	°C	ASTM D86		<b>344</b>	---	---
Final Boiling Point	°C	ASTM D86		<b>350</b>	---	---
Distillation Residue	%	ASTM D86		<b>1.4</b>	---	---
Distillation Loss	%	ASTM D86		<b>0.7</b>	---	---

IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777		<b>36.4</b>	---	---
Cetane Index		ASTM D4737	<40.0	<b>47.5</b>	---	---

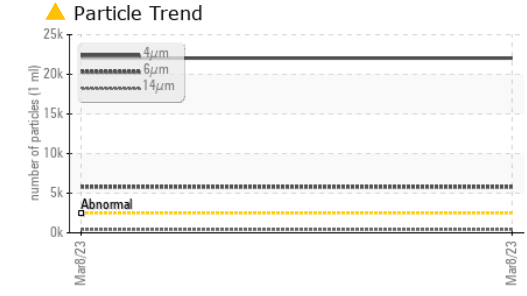
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	<b>0</b>	---	---
Sodium	ppm	ASTM D5185m	<0.1	<b>0</b>	---	---
Potassium	ppm	ASTM D5185m	<0.1	<b>0</b>	---	---
Water	%	ASTM D6304	<0.05	<b>0.005</b>	---	---
ppm Water	ppm	ASTM D6304	<500	<b>55.1</b>	---	---
% Gasoline	%	*In-House	<0.50	<b>0.0</b>	---	---
% Biodiesel	%	*In-House	<20.0	<b>2.4</b>	---	---



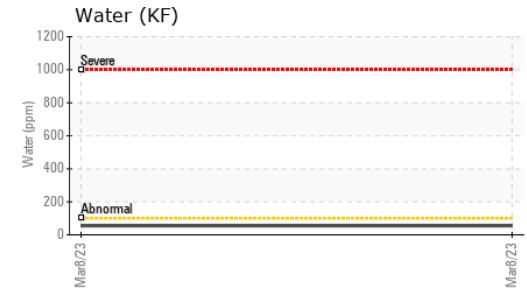
# FUEL REPORT



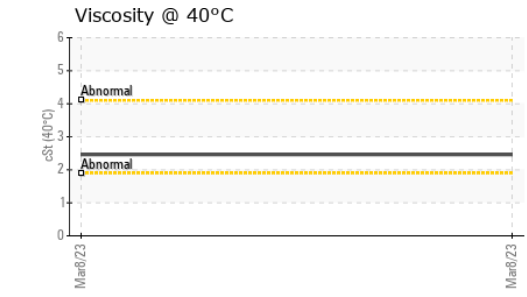
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	<b>▲ 22046</b>	---	---
Particles >6µm	ASTM D7647	>640	<b>▲ 5798</b>	---	---
Particles >14µm	ASTM D7647	>80	<b>▲ 414</b>	---	---
Particles >21µm	ASTM D7647	>20	<b>▲ 105</b>	---	---
Particles >38µm	ASTM D7647	>4	<b>2</b>	---	---
Particles >71µm	ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	<b>▲ 22/20/16</b>	---	---



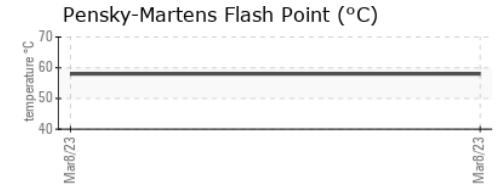
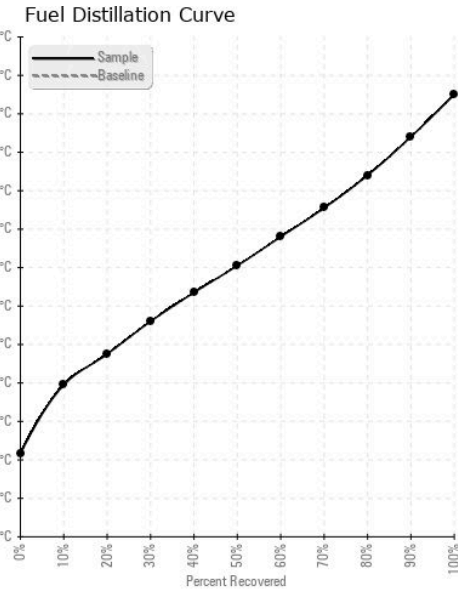
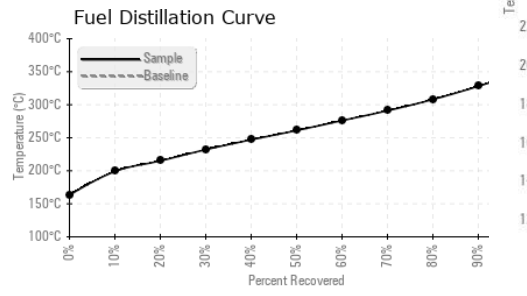
HEAVY METALS	method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m	<0.1	<b>0</b>	---
Nickel	ppm	ASTM D5185m	<0.1	<b>0</b>	---
Lead	ppm	ASTM D5185m	<0.1	<b>0</b>	---
Vanadium	ppm	ASTM D5185m	<0.1	<b>0</b>	---
Iron	ppm	ASTM D5185m	<0.1	<b>0</b>	---
Calcium	ppm	ASTM D5185m	<0.1	<b>0</b>	---
Magnesium	ppm	ASTM D5185m	<0.1	<b>0</b>	---
Phosphorus	ppm	ASTM D5185m	<0.1	<b>0</b>	---
Zinc	ppm	ASTM D5185m	<0.1	<b>0</b>	---



SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image



### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0798106 **Received** : 28 Apr 2023  
**Lab Number** : **05833364** **Diagnosed** : 09 May 2023  
**Unique Number** : 10446857 **Diagnostician** : Doug Bogart  
**Test Package** : DF-2 ( Additional Tests: Screen )

**KB POWER SYSTEMS LLC**  
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 Lillington, NC  
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Certificate L2367  
 To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)