



# FUEL REPORT

Sample Rating Trend



**NORMAL**



Area  
**QTS CHICAGO**  
 Machine Id  
**[QTS CHICAGO] GEN M1**  
 Component  
**Diesel Fuel**  
 Fluid  
**No.2 DIESEL FUEL (ULTRALOW SULPHUR) (10000 GAL)**

## DIAGNOSIS

### Recommendation

All laboratory tests indicate that this sample meets specifications for No.2 low-sulfur diesel fuel.

### Corrosion

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

### Contaminants

The water content is negligible. There is no bacteria or fungus (yeast and/or mold) indicated in the sample. There is no indication of any contamination in the fuel. The amount and size of particulates present in the system are acceptable.

### Fuel Condition

Sulfur value derived by ASTM D5453 method for ULSD validation.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC06185711</b>	---	---
Sample Date	Client Info		<b>20 May 2024</b>	---	---
Machine Age	hrs	Client Info	<b>0</b>	---	---
Sample Status			<b>NORMAL</b>	---	---

## PHYSICAL PROPERTIES

	method	limit/base	current	history1	history2
Fuel Color	text	*Visual Screen	Yellow	<b>Red</b>	---
ASTM Color	scalar	*ASTM D1500		<b>L4.5</b>	---
Visc @ 40°C	cSt	ASTM D445	3.0	<b>2.59</b>	---
Pensky-Martens Flash Point	°C	*PMCC Calculated	52	<b>61.6</b>	---

## SULFUR CONTENT

	method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m	10	<b>0</b>	---
Sulfur (UVF)	ppm	ASTM D5453		<b>18</b>	---

## DISTILLATION

	method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86	165	<b>172</b>	---
5% Distillation Point	°C	ASTM D86		<b>195</b>	---
10% Distill Point	°C	ASTM D86	201	<b>206</b>	---
15% Distillation Point	°C	ASTM D86		<b>214</b>	---
20% Distill Point	°C	ASTM D86	216	<b>222</b>	---
30% Distill Point	°C	ASTM D86	230	<b>236</b>	---
40% Distill Point	°C	ASTM D86	243	<b>249</b>	---
50% Distill Point	°C	ASTM D86	255	<b>262</b>	---
60% Distill Point	°C	ASTM D86	267	<b>275</b>	---
70% Distill Point	°C	ASTM D86	280	<b>288</b>	---
80% Distill Point	°C	ASTM D86	295	<b>303</b>	---
85% Distillation Point	°C	ASTM D86		<b>313</b>	---
90% Distill Point	°C	ASTM D86	310	<b>323</b>	---
95% Distillation Point	°C	ASTM D86		<b>341</b>	---
Final Boiling Point	°C	ASTM D86	341	<b>356</b>	---

## IGNITION QUALITY

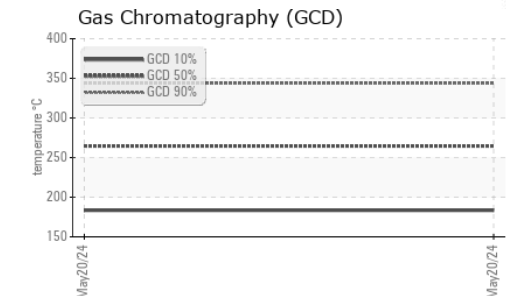
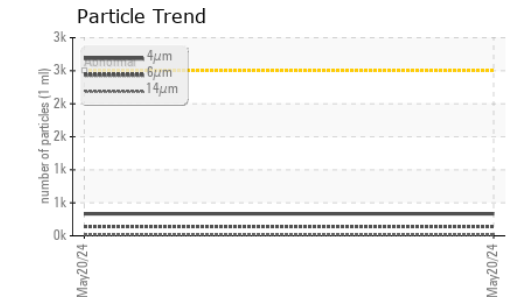
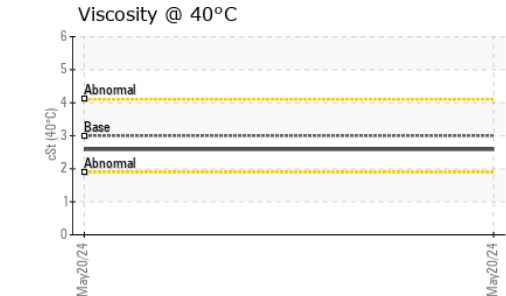
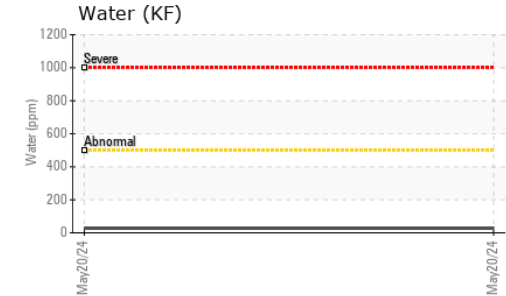
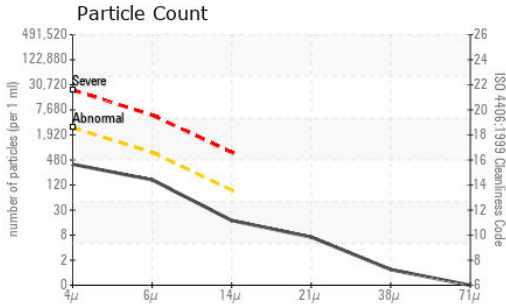
	method	limit/base	current	history1	history2
API Gravity	ASTM D7777	37.7	<b>34</b>	---	---
Cetane Index	ASTM D4737	<40.0	<b>44</b>	---	---

## 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>0.003</b>	---
ppm Water	ppm	ASTM D6304	<500	<b>28</b>	---
% Gasoline	%	*In-House	<0.50	<b>0.0</b>	---
% Biodiesel	%	*In-House	<20.0	<b>0.0</b>	---



# FUEL REPORT

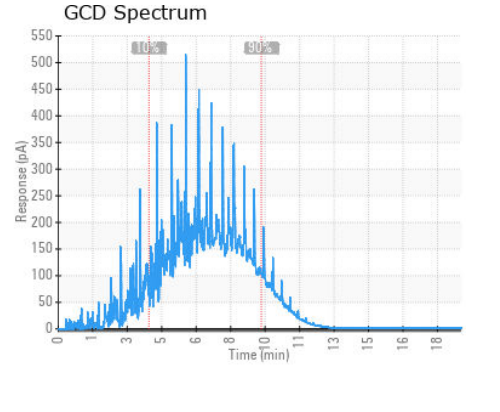
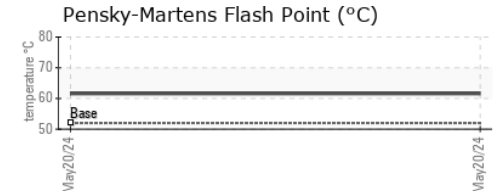
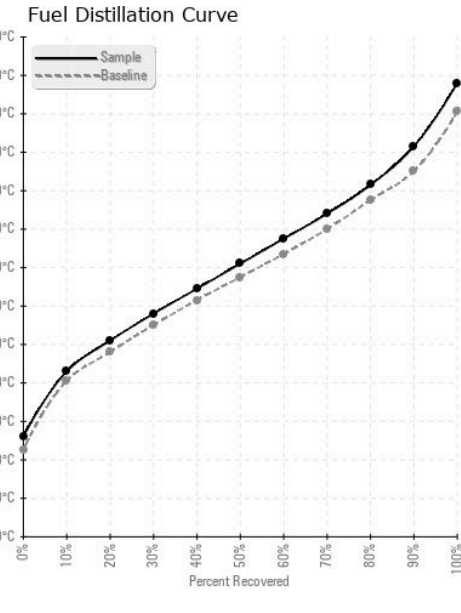


FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	<b>333</b>	---	---
Particles >6µm	ASTM D7647	>640	<b>141</b>	---	---
Particles >14µm	ASTM D7647	>80	<b>15</b>	---	---
Particles >21µm	ASTM D7647	>20	<b>6</b>	---	---
Particles >38µm	ASTM D7647	>4	<b>1</b>	---	---
Particles >71µm	ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	<b>16/14/11</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.** : WC06185711 **Received** : 20 May 2024  
**Lab Number** : **06185711** **Tested** : 28 May 2024  
**Unique Number** : 11037037 **Diagnosed** : 28 May 2024 - Doug Bogart  
**Test Package** : DF-2 ( Additional Tests: Bacteria, Fuel, Screen )

**PETROLEUM RECOVERY SERVICES**  
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 SUMMERVILLE, SC  
 US 29483  
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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)