



# FUEL REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**GOOGLE-LNR-B-2-I**  
 Component  
**Diesel Fuel**  
 Fluid  
**DIESEL FUEL No. 2 (--- GAL)**



## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. 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 moderate 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	history2
Sample Number	Client Info			<b>WC0869488</b>	---	---
Sample Date	Client Info			<b>05 Oct 2023</b>	---	---
Machine Age	hrs	Client Info		<b>0</b>	---	---
Sample Status				<b>NORMAL</b>	---	---

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298		<b>0.844</b>	---	---
Fuel Color	text	*Visual Screen		<b>Red</b>	---	---
ASTM Color	scalar	*ASTM D1500		<b>L4.5</b>	---	---
Visc @ 40°C	cSt	ASTM D445	4.1	<b>2.46</b>	---	---
Pensky-Martens Flash Point	°C	*PMCC Calculated		<b>59</b>	---	---

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m		<b>0</b>	---	---
Sulfur (UVF)	ppm	ASTM D5453		<b>9</b>	---	---

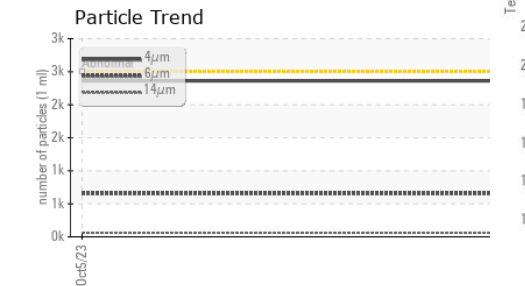
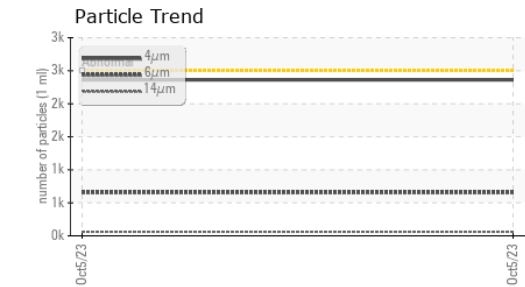
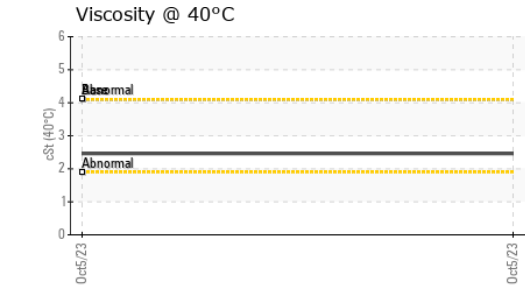
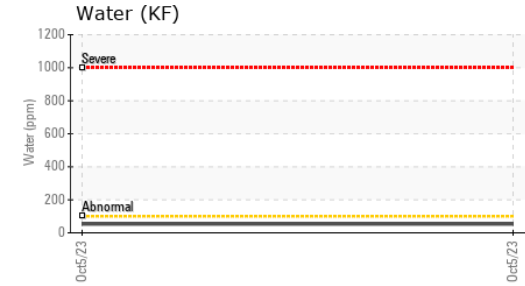
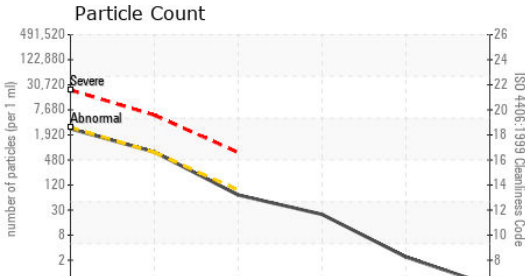
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		<b>165</b>	---	---
5% Distillation Point	°C	ASTM D86		<b>192</b>	---	---
10% Distill Point	°C	ASTM D86		<b>202</b>	---	---
15% Distillation Point	°C	ASTM D86		<b>211</b>	---	---
20% Distill Point	°C	ASTM D86		<b>218</b>	---	---
30% Distill Point	°C	ASTM D86		<b>233</b>	---	---
40% Distill Point	°C	ASTM D86		<b>246</b>	---	---
50% Distill Point	°C	ASTM D86		<b>259</b>	---	---
60% Distill Point	°C	ASTM D86		<b>273</b>	---	---
70% Distill Point	°C	ASTM D86		<b>287</b>	---	---
80% Distill Point	°C	ASTM D86		<b>303</b>	---	---
85% Distillation Point	°C	ASTM D86		<b>313</b>	---	---
90% Distill Point	°C	ASTM D86		<b>324</b>	---	---
95% Distillation Point	°C	ASTM D86		<b>342</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>36.2</b>	---	---
Cetane Index		ASTM D4737	<40.0	<b>46.7</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>&lt;1</b>	---	---
Water	%	ASTM D6304	<0.05	<b>0.005</b>	---	---
ppm Water	ppm	ASTM D6304	<500	<b>53.3</b>	---	---
% Gasoline	%	*In-House	<0.50	<b>0.0</b>	---	---
% Biodiesel	%	*In-House	<20.0	<b>0.0</b>	---	---



# FUEL REPORT

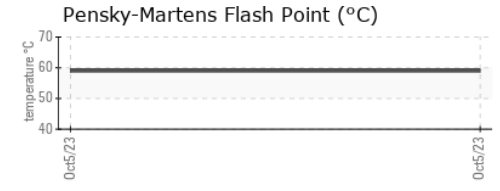
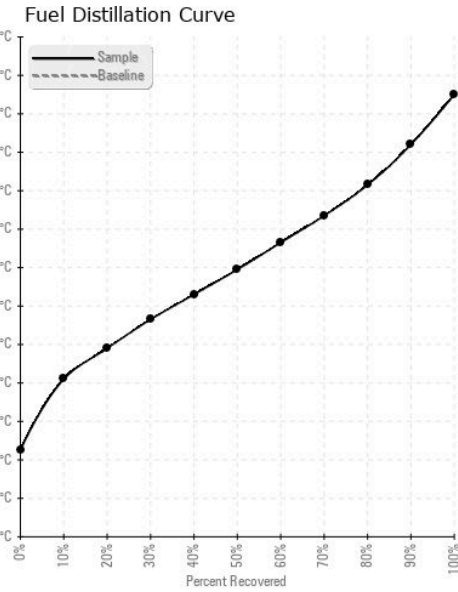


FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	<b>2361</b>	---	---
Particles >6µm	ASTM D7647	>640	<b>657</b>	---	---
Particles >14µm	ASTM D7647	>80	<b>61</b>	---	---
Particles >21µm	ASTM D7647	>20	<b>21</b>	---	---
Particles >38µm	ASTM D7647	>4	<b>2</b>	---	---
Particles >71µm	ASTM D7647	>3	<b>0</b>	---	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	<b>18/17/13</b>	---	---

HEAVY METALS	method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m <0.1	<b>2</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>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m <0.1	<b>&lt;1</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					
Bottom					

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0869488 **Received** : 17 Oct 2023  
**Lab Number** : **05981562** **Diagnosed** : 25 Oct 2023  
**Unique Number** : 10698857 **Diagnostician** : Doug Bogart  
**Test Package** : DF-2 ( Additional Tests: Screen )

**VITAL FUEL SYSTEMS**  
 1076 CLASSIC RD  
 APEX, NC  
 US 27539  
 Contact: JOHN MORREALE  
 jmorreale@vitalfuelsystems.com  
 T: (919)629-8180  
 F: (919)303-7399

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)