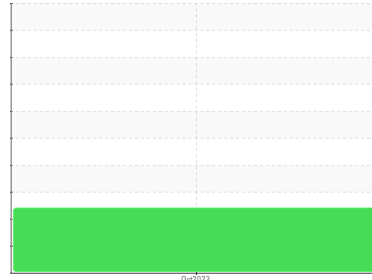




FUEL REPORT

Sample Rating Trend



ISO



Machine Id
GOOGLE-LNR-B-2-D

Component
Diesel Fuel
Fluid
DIESEL FUEL No. 2 (--- 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.

Corrosion

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	history2
Sample Number	Client Info			WC0862202	---	---
Sample Date	Client Info			05 Oct 2023	---	---
Machine Age	hrs	Client Info		0	---	---
Sample Status				ATTENTION	---	---

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298		0.838	---	---
Fuel Color	text	*Visual Screen		Red	---	---
ASTM Color	scalar	*ASTM D1500		L4.5	---	---
Visc @ 40°C	cSt	ASTM D445	4.1	2.31	---	---
Pensky-Martens Flash Point	°C	*PMCC Calculated		59	---	---

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

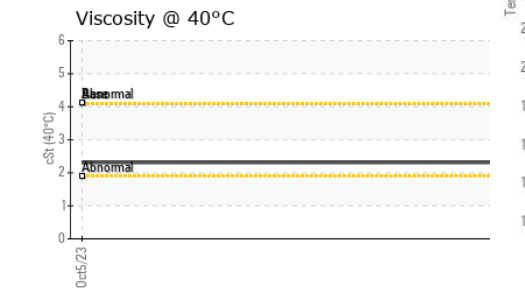
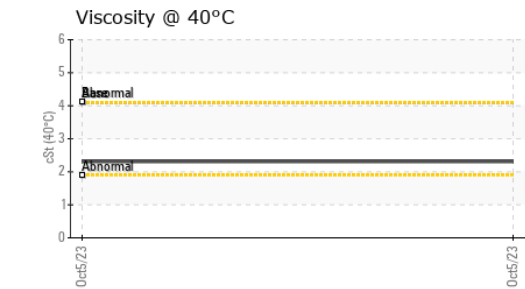
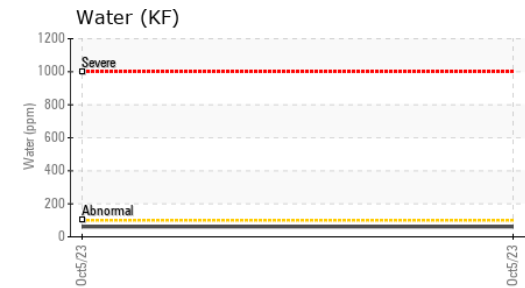
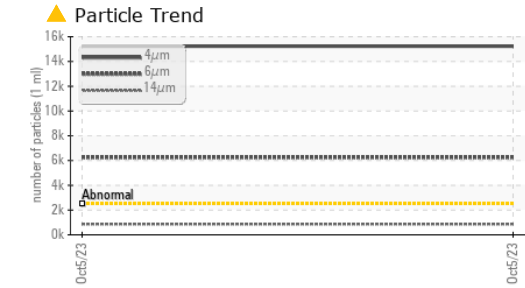
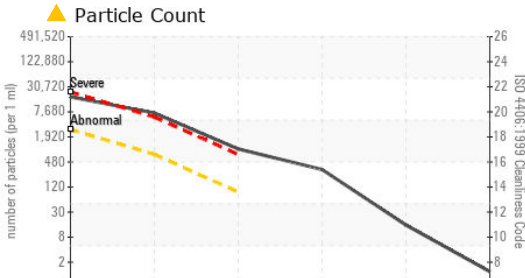
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		165	---	---
5% Distillation Point	°C	ASTM D86		188	---	---
10% Distill Point	°C	ASTM D86		197	---	---
15% Distillation Point	°C	ASTM D86		204	---	---
20% Distill Point	°C	ASTM D86		212	---	---
30% Distill Point	°C	ASTM D86		226	---	---
40% Distill Point	°C	ASTM D86		239	---	---
50% Distill Point	°C	ASTM D86		253	---	---
60% Distill Point	°C	ASTM D86		268	---	---
70% Distill Point	°C	ASTM D86		284	---	---
80% Distill Point	°C	ASTM D86		302	---	---
85% Distillation Point	°C	ASTM D86		312	---	---
90% Distill Point	°C	ASTM D86		325	---	---
95% Distillation Point	°C	ASTM D86		344	---	---
Final Boiling Point	°C	ASTM D86		352	---	---
Distillation Residue	%	ASTM D86		1.4	---	---
Distillation Loss	%	ASTM D86		0.8	---	---

IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777		37.4	---	---
Cetane Index		ASTM D4737	<40.0	47.6	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	0	---	---
Sodium	ppm	ASTM D5185m	<0.1	0	---	---
Potassium	ppm	ASTM D5185m	<0.1	<1	---	---
Water	%	ASTM D6304	<0.05	0.006	---	---
ppm Water	ppm	ASTM D6304	<500	61.0	---	---
% Gasoline	%	*In-House	<0.50	0.0	---	---
% Biodiesel	%	*In-House	<20.0	0.0	---	---



FUEL REPORT

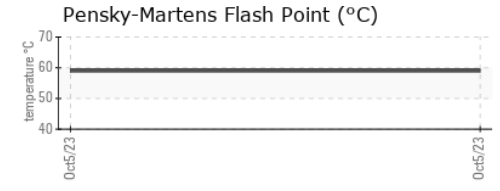
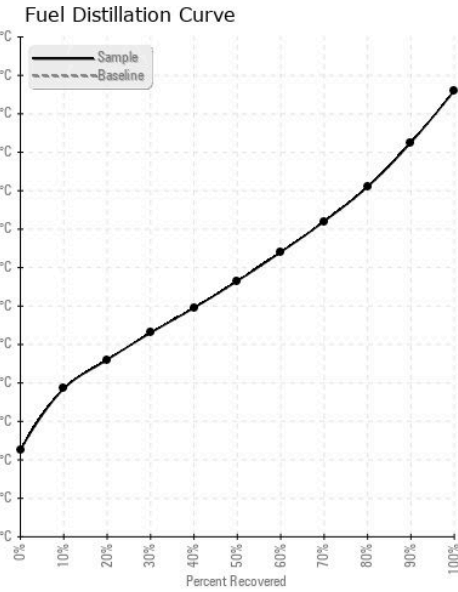


FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	▲ 15229	---	---
Particles >6µm	ASTM D7647	>640	▲ 6257	---	---
Particles >14µm	ASTM D7647	>80	▲ 864	---	---
Particles >21µm	ASTM D7647	>20	▲ 278	---	---
Particles >38µm	ASTM D7647	>4	▲ 13	---	---
Particles >71µm	ASTM D7647	>3	1	---	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ 21/20/17	---	---

HEAVY METALS	method	limit/base	current	history1	history2	
Aluminum	ppm	ASTM D5185m	<0.1	2	---	---
Nickel	ppm	ASTM D5185m	<0.1	0	---	---
Lead	ppm	ASTM D5185m	<0.1	0	---	---
Vanadium	ppm	ASTM D5185m	<0.1	0	---	---
Iron	ppm	ASTM D5185m	<0.1	0	---	---
Calcium	ppm	ASTM D5185m	<0.1	<1	---	---
Magnesium	ppm	ASTM D5185m	<0.1	<1	---	---
Phosphorus	ppm	ASTM D5185m	<0.1	0	---	---
Zinc	ppm	ASTM D5185m	<0.1	0	---	---

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. : WC0862202 **Received** : 17 Oct 2023
Lab Number : 05981561 **Diagnosed** : 25 Oct 2023
Unique Number : 10698856 **Diagnostician** : Doug Bogart
Test Package : DF-2 (Additional Tests: Screen)

VITAL FUEL SYSTEMS
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 APEX, NC
 US 27539
 Contact: JOHN MORREALE
 jmorreale@vitalfuelsystems.com
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 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)