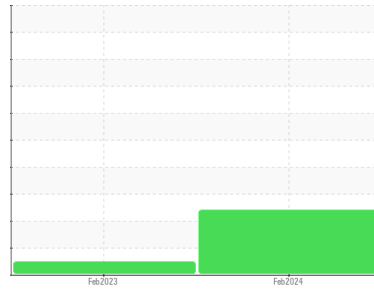




FUEL REPORT

Sample Rating Trend



ISO



Machine Id
CORESITE - UST 4

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			WC0914213	WC0767487	---
Sample Date	Client Info			19 Feb 2024	03 Feb 2023	---
Machine Age	hrs	Client Info		0	0	---
Sample Status				ABNORMAL	NORMAL	---

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298		0.840	0.841	---
Fuel Color	text	*Visual Screen		Red	Red	---
ASTM Color	scalar	*ASTM D1500		L4.5	L4.5	---
Visc @ 40°C	cSt	ASTM D445	4.1	2.4	2.37	---
Pensky-Martens Flash Point	°C	*PMCC Calculated		57	57	---

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m		0	0	---
Sulfur (UVF)	ppm	ASTM D5453		6	7	---

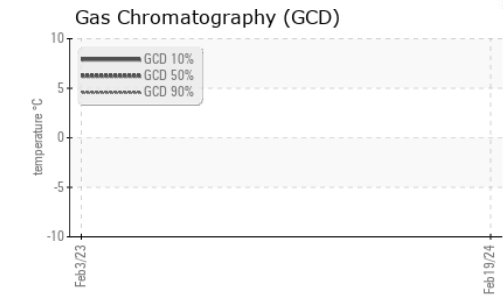
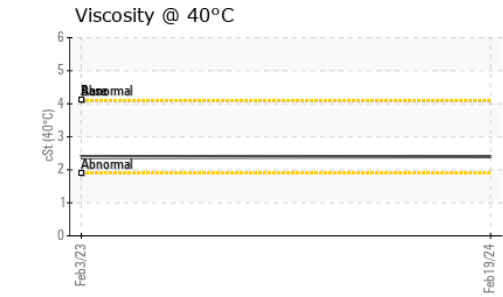
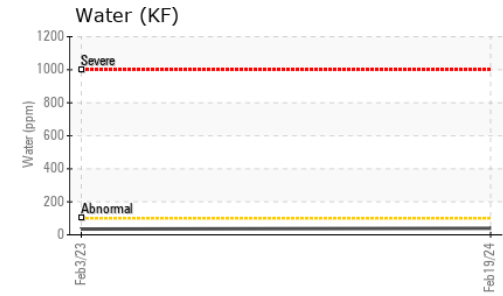
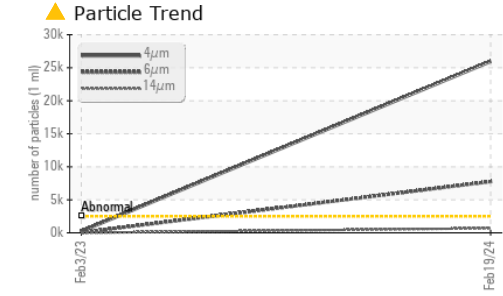
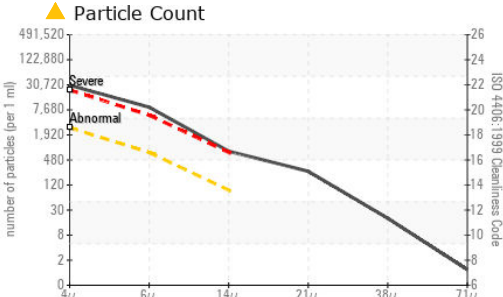
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		160	159	---
5% Distillation Point	°C	ASTM D86		187	185	---
10% Distill Point	°C	ASTM D86		196	195	---
15% Distillation Point	°C	ASTM D86		205	204	---
20% Distill Point	°C	ASTM D86		214	212	---
30% Distill Point	°C	ASTM D86		228	226	---
40% Distill Point	°C	ASTM D86		243	241	---
50% Distill Point	°C	ASTM D86		257	256	---
60% Distill Point	°C	ASTM D86		272	271	---
70% Distill Point	°C	ASTM D86		288	287	---
80% Distill Point	°C	ASTM D86		304	304	---
85% Distillation Point	°C	ASTM D86		314	314	---
90% Distill Point	°C	ASTM D86		326	325	---
95% Distillation Point	°C	ASTM D86		343	342	---
Final Boiling Point	°C	ASTM D86		353	353	---
Distillation Residue	%	ASTM D86		1.4	1.4	---
Distillation Loss	%	ASTM D86		0.7	0.5	---

IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777		37.0	36.8	---
Cetane Index		ASTM D4737	<40.0	47.7	46.8	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	0	<1	---
Sodium	ppm	ASTM D5185m	<0.1	0	0	---
Potassium	ppm	ASTM D5185m	<0.1	0	0	---
Water	%	ASTM D6304	<0.05	0.003	0.003	---
ppm Water	ppm	ASTM D6304	<500	40	35.1	---
% Gasoline	%	*In-House	<0.50	0.0	0.0	---
% Biodiesel	%	*In-House	<20.0	0.0	0.0	---



FUEL REPORT

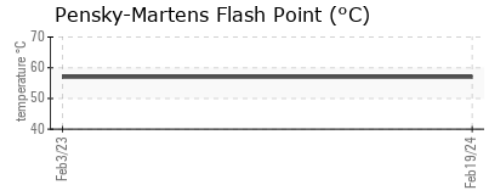
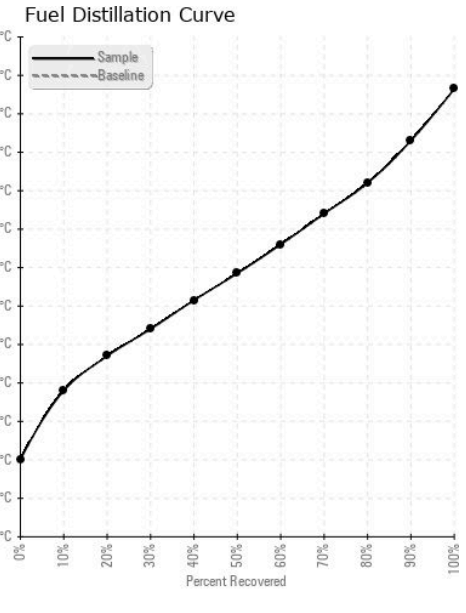


FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	▲ 25957	220	---
Particles >6µm	ASTM D7647	>640	▲ 7753	38	---
Particles >14µm	ASTM D7647	>80	▲ 684	2	---
Particles >21µm	ASTM D7647	>20	▲ 226	1	---
Particles >38µm	ASTM D7647	>4	▲ 17	0	---
Particles >71µm	ASTM D7647	>3	▲ 1	0	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ 22/20/17	15/12/9	---

HEAVY METALS	method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m <0.1	0	0	---
Nickel	ppm	ASTM D5185m <0.1	0	0	---
Lead	ppm	ASTM D5185m <0.1	0	0	---
Vanadium	ppm	ASTM D5185m <0.1	0	0	---
Iron	ppm	ASTM D5185m <0.1	0	0	---
Calcium	ppm	ASTM D5185m <0.1	0	7	---
Magnesium	ppm	ASTM D5185m <0.1	0	<1	---
Phosphorus	ppm	ASTM D5185m <0.1	0	2	---
Zinc	ppm	ASTM D5185m <0.1	0	0	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0914213 **Received** : 26 Feb 2024
Lab Number : 06101273 **Tested** : 04 Mar 2024
Unique Number : 10899503 **Diagnosed** : 04 Mar 2024 - Doug Bogart
Test Package : DF-2 (Additional Tests: Screen)

VITAL FUEL SYSTEMS
 1076 CLASSIC RD
 APEX, NC
 US 27539
 Contact: JOHN MORREALE
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 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)