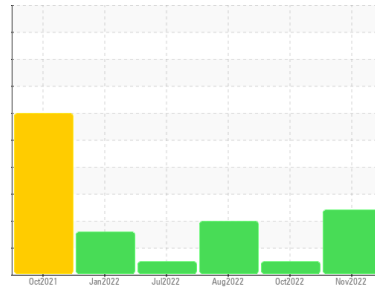




FUEL REPORT

Sample Rating Trend



ISO



Area
HOSPITAL
 Machine Id
DUKE GEN HUB DAY TANK 1
 Component
Diesel Fuel
 Fluid
{not provided} (409 GAL)

DIAGNOSIS

Recommendation

We recommend pre-filter before use. All other 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	WC05687550	WC05661876	WC05624085
Sample Date	Client Info	07 Nov 2022	09 Oct 2022	21 Aug 2022
Machine Age	hrs	0	0	0
Sample Status		ABNORMAL	NORMAL	ABNORMAL

PHYSICAL PROPERTIES

method	limit/base	current	history1	history2
Specific Gravity	*ASTM D1298	0.837	0.837	0.837
Fuel Color	text	Red	Red	Red
ASTM Color	scalar	L4.0	L4.5	L4.5
Visc @ 40°C	cSt	2.37	2.37	2.38
Pensky-Martens Flash Point	°C	62	62	63

SULFUR CONTENT

method	limit/base	current	history1	history2
Sulfur	ppm	0	0	0
Sulfur (UVF)	ppm	8	8	9

DISTILLATION

method	limit/base	current	history1	history2
Initial Boiling Point	°C	167	167	166
5% Distillation Point	°C	190	191	190
10% Distill Point	°C	198	199	198
15% Distillation Point	°C	205	206	206
20% Distill Point	°C	212	213	211
30% Distill Point	°C	226	227	226
40% Distill Point	°C	241	241	240
50% Distill Point	°C	255	256	255
60% Distill Point	°C	271	272	271
70% Distill Point	°C	288	289	288
80% Distill Point	°C	307	307	307
85% Distillation Point	°C	317	317	317
90% Distill Point	°C	327	327	328
95% Distillation Point	°C	342	342	342
Final Boiling Point	°C	349	349	349
Distillation Residue	%	1.4	1.4	1.4
Distillation Loss	%	0.8	0.7	0.8

IGNITION QUALITY

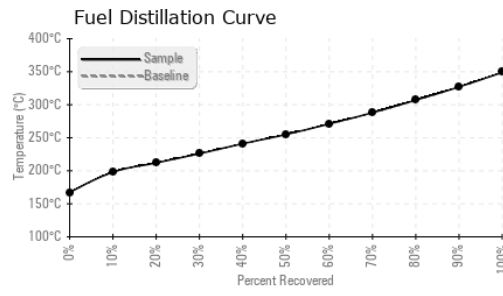
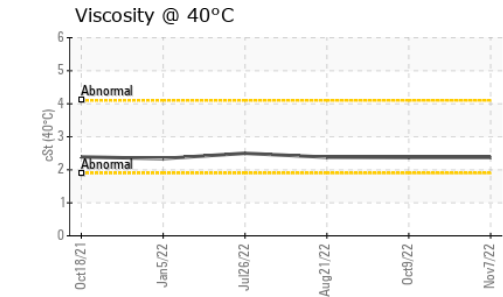
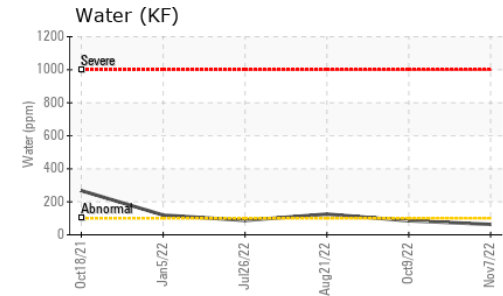
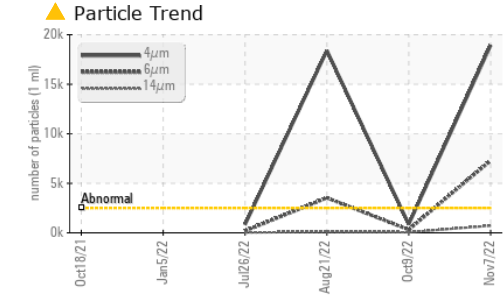
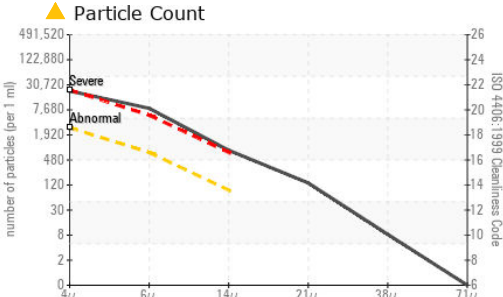
method	limit/base	current	history1	history2
API Gravity	ASTM D7777	37.6	37.6	37.6
Cetane Index	ASTM D4737	48.4	48.6	48.6

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm	0	0	0
Sodium	ppm	0	0	0
Potassium	ppm	0	0	0
Water	%	0.006	0.008	0.012
ppm Water	ppm	63.2	85.2	125.5
% Gasoline	%	0.0	0.0	0.0
% Biodiesel	%	4.9	4.5	4.5



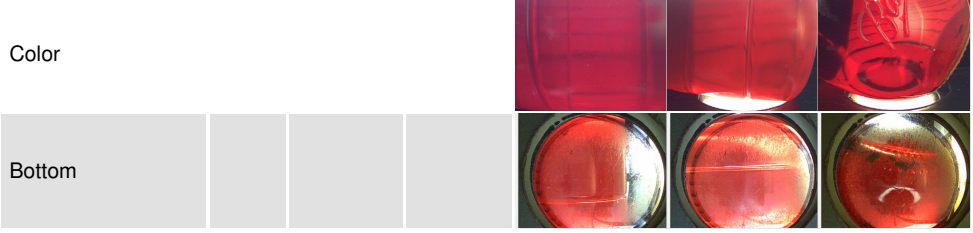
FUEL REPORT



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	▲ 18922	863	▲ 18396
Particles >6µm	ASTM D7647	>640	▲ 7282	311	▲ 3526
Particles >14µm	ASTM D7647	>80	▲ 722	54	▲ 97
Particles >21µm	ASTM D7647	>20	▲ 119	15	12
Particles >38µm	ASTM D7647	>4	▲ 7	2	0
Particles >71µm	ASTM D7647	>3	0	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ 21/20/17	17/15/13	▲ 21/19/14

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

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC05687550 **Received** : 07 Nov 2022
Lab Number : **05687550** **Tested** : 14 Nov 2022
Unique Number : 10207122 **Diagnosed** : 14 Nov 2022 - Doug Bogart
Test Package : DF-2 (Additional Tests: Screen)

COUCH OIL COMPANY
 2907 HILLSBOROUGH RD
 DURHAM, NC
 US 27705
 Contact: JESSE BROWN
 jesse@couchoilcompany.com
 T: (919)285-5408
 F:

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)