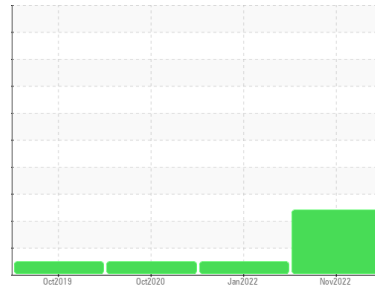




FUEL REPORT

Sample Rating Trend



ISO



Area
HOSPITAL
 Machine Id
DUKE NORTH GEN 1 DAY TANK
 Component
Diesel Fuel
 Fluid
No.2 DIESEL FUEL (LOW-SULPHUR) (100 GAL)

DIAGNOSIS

Recommendation

We recommend pre-filtering 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			WC05687542	WC05437424	WC05088149
Sample Date	Client Info			07 Nov 2022	04 Jan 2022	11 Oct 2020
Machine Age	hrs	Client Info		0	0	0
Sample Status				ABNORMAL	NORMAL	NORMAL

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298	0.839	0.837	0.841	0.842
Fuel Color	text	*Visual Screen	Yellow	Red	Red	Red
ASTM Color	scalar	*ASTM D1500		L4.0	L5.5	L5.5
Visc @ 40°C	cSt	ASTM D445	3.0	2.32	2.53	2.45
Pensky-Martens Flash Point	°C	*PMCC Calculated	52	64	61	62

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m	250	0	27	28
Sulfur (UVF)	ppm	ASTM D5453		7	30	32

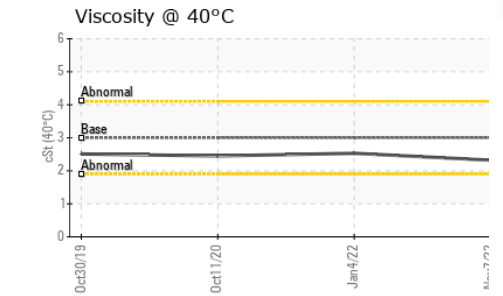
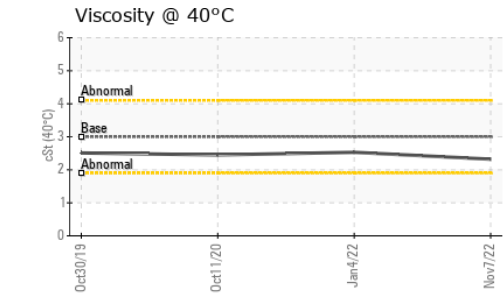
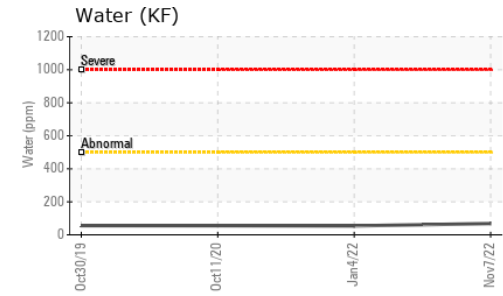
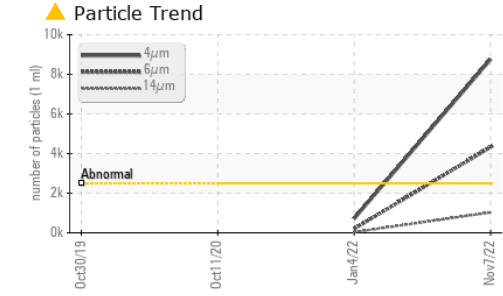
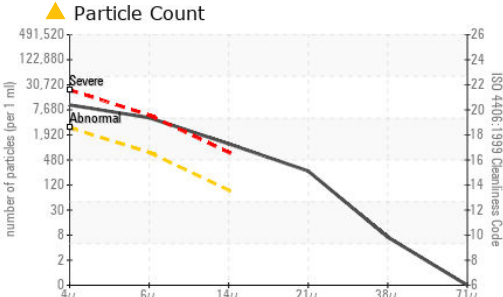
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86	165	168	165	161
5% Distillation Point	°C	ASTM D86		189	189	186
10% Distill Point	°C	ASTM D86	201	197	200	199
15% Distillation Point	°C	ASTM D86		204	209	208
20% Distill Point	°C	ASTM D86	216	211	217	217
30% Distill Point	°C	ASTM D86	230	226	232	232
40% Distill Point	°C	ASTM D86	243	240	247	246
50% Distill Point	°C	ASTM D86	255	255	261	261
60% Distill Point	°C	ASTM D86	267	271	275	275
70% Distill Point	°C	ASTM D86	280	288	291	290
80% Distill Point	°C	ASTM D86	295	306	307	306
85% Distillation Point	°C	ASTM D86		316	316	316
90% Distill Point	°C	ASTM D86	310	327	327	326
95% Distillation Point	°C	ASTM D86		341	343	335
Final Boiling Point	°C	ASTM D86	341	349	350	342
Distillation Residue	%	ASTM D86	3.0	1.4	1.4	1.4
Distillation Loss	%	ASTM D86	3.0	0.4	0.6	0.5

IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777	37.7	37.6	36.8	36.6
Cetane Index		ASTM D4737	<40.0	48.5	48.1	47.7

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	0	0	<1
Sodium	ppm	ASTM D5185m	<0.1	0	0	0
Potassium	ppm	ASTM D5185m	<0.1	0	0	1
Water	%	ASTM D6304	<0.05	0.006	0.005	0.005
ppm Water	ppm	ASTM D6304	<500	68.5	54.1	55.4
% Gasoline	%	*In-House	<0.50	0.0	0.0	0.0
% Biodiesel	%	*In-House	<20.0	0.0	1.3	1.3



FUEL REPORT




FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	▲ 8750	711	---
Particles >6µm	ASTM D7647	>640	▲ 4330	207	---
Particles >14µm	ASTM D7647	>80	▲ 1027	29	---
Particles >21µm	ASTM D7647	>20	▲ 229	9	---
Particles >38µm	ASTM D7647	>4	▲ 6	0	---
Particles >71µm	ASTM D7647	>3	0	0	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ 20/19/17	17/15/12	---


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

SAMPLE IMAGES

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

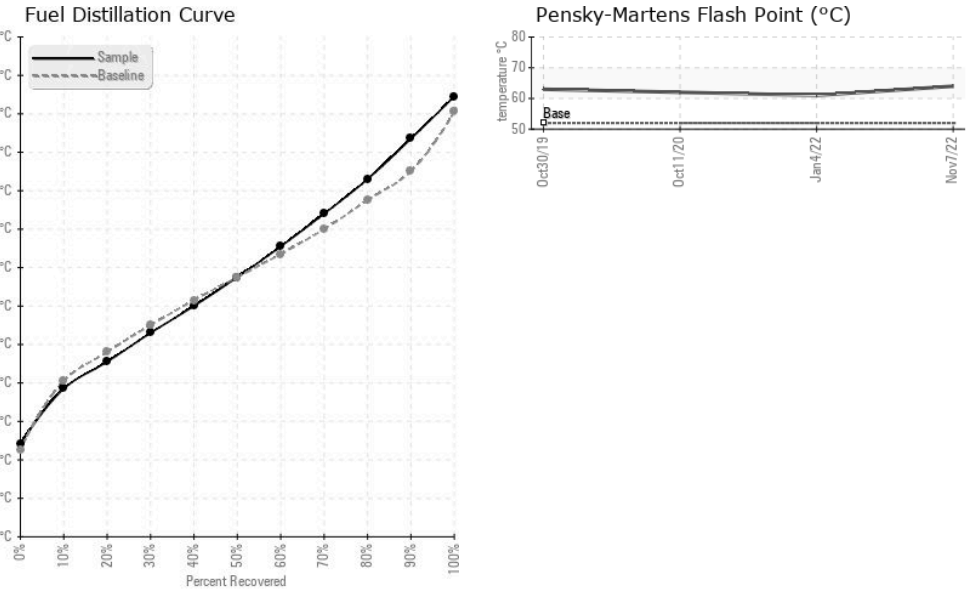


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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC05687542 **Received** : 07 Nov 2022
Lab Number : 05687542 **Tested** : 11 Nov 2022
Unique Number : 10207114 **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:

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)