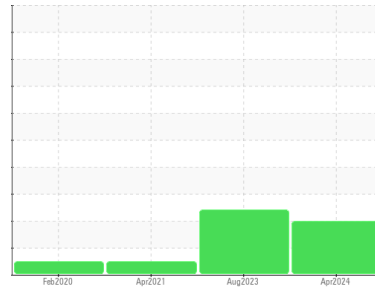




FUEL REPORT

Sample Rating Trend



ISO



Machine Id
TOWN OF BUTNER

Component
Diesel Fuel

Fluid
No.2 DIESEL FUEL (HIGH-SULPHUR) (--- QTS)

DIAGNOSIS

Recommendation

We advise that you filter this fluid before use. All laboratory tests indicate that this sample meets specifications for No.2 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC06142591	WC05925213	WC05234371
Sample Date	Client Info			08 Apr 2024	15 Aug 2023	20 Apr 2021
Machine Age	hrs	Client Info		0	0	0
Sample Status				ABNORMAL	ATTENTION	NORMAL

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298	0.839	---	0.857	0.860
Fuel Color	text	*Visual Screen	Yellow	Red	Red	Red
ASTM Color	scalar	*ASTM D1500		L4.5	L4.5	L5.5
Visc @ 40°C	cSt	ASTM D445	3.0	2.67	2.67	2.74
Pensky-Martens Flash Point	°C	*PMCC Calculated	52	67.5	60	71

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m	500	773	1155	1181
Sulfur (UVF)	ppm	ASTM D5453		1146	988	---

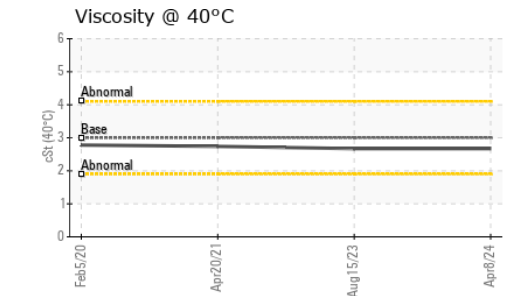
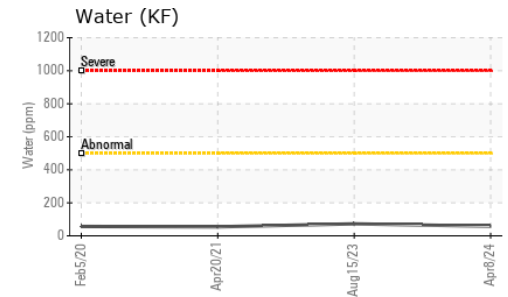
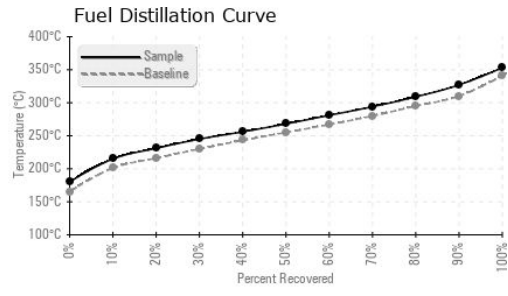
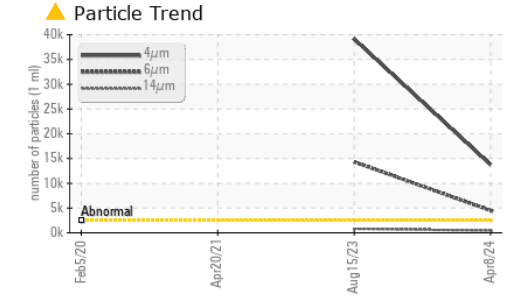
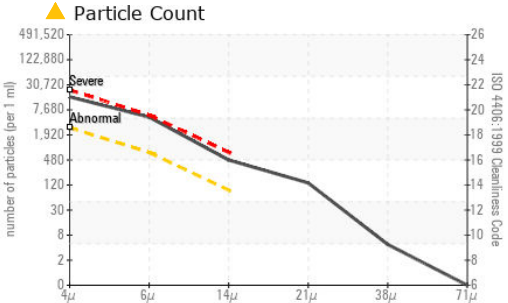
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86	165	180	166	168
5% Distillation Point	°C	ASTM D86		205	201	199
10% Distill Point	°C	ASTM D86	201	215	212	210
15% Distillation Point	°C	ASTM D86		223	222	219
20% Distill Point	°C	ASTM D86	216	231	229	227
30% Distill Point	°C	ASTM D86	230	245	244	243
40% Distill Point	°C	ASTM D86	243	256	257	256
50% Distill Point	°C	ASTM D86	255	268	269	269
60% Distill Point	°C	ASTM D86	267	281	282	281
70% Distill Point	°C	ASTM D86	280	294	295	294
80% Distill Point	°C	ASTM D86	295	309	309	308
85% Distillation Point	°C	ASTM D86		318	317	316
90% Distill Point	°C	ASTM D86	310	327	327	326
95% Distillation Point	°C	ASTM D86		339	341	340
Final Boiling Point	°C	ASTM D86	341	353	344	343
Distillation Residue	%	ASTM D86	3.0	---	1.4	1.4
Distillation Loss	%	ASTM D86	3.0	---	0.5	0.6

IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777	37.7	33	33.6	33.0
Cetane Index		ASTM D4737	<40.0	43	41.9	40.8

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	<1	1	<1
Sodium	ppm	ASTM D5185m	<0.1	2	0	0
Potassium	ppm	ASTM D5185m	<0.1	0	0	0
Water	%	ASTM D6304	<0.05	0.005	0.007	0.005
ppm Water	ppm	ASTM D6304	<500	58	72.6	54.6
% Gasoline	%	*In-House	<0.50	0.0	0.0	---
% Biodiesel	%	*In-House	<20.0	1.9	2.1	---



FUEL REPORT



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	▲ 13724	● 39136	---
Particles >6µm	ASTM D7647	>640	▲ 4488	● 14325	---
Particles >14µm	ASTM D7647	>80	▲ 421	● 808	---
Particles >21µm	ASTM D7647	>20	▲ 119	● 202	---
Particles >38µm	ASTM D7647	>4	4	● 15	---
Particles >71µm	ASTM D7647	>3	0	1	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ 21/19/16	● 22/21/17	---

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	<1
Lead	ppm	ASTM D5185m <0.1	0	0	<1
Vanadium	ppm	ASTM D5185m <0.1	0	0	0
Iron	ppm	ASTM D5185m <0.1	0	<1	<1
Calcium	ppm	ASTM D5185m <0.1	0	0	0
Magnesium	ppm	ASTM D5185m <0.1	0	<1	0
Phosphorus	ppm	ASTM D5185m <0.1	0	<1	0
Zinc	ppm	ASTM D5185m <0.1	0	0	<1

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC06142591 **Received** : 08 Apr 2024
Lab Number : **06142591** **Tested** : 22 Apr 2024
Unique Number : 10967399 **Diagnosed** : 22 Apr 2024 - Doug Bogart
Test Package : DF-2 (Additional Tests: Fuel, 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)