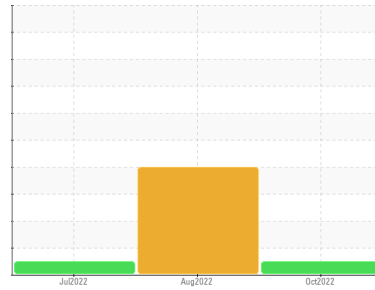




# FUEL REPORT

Sample Rating Trend



**NORMAL**



Area  
**HOSPITAL**  
 Machine Id  
**DUKE GEN HUB 30K TANK 2**  
 Component  
**Diesel Fuel**  
 Fluid  
**{not provided} (30000 GAL)**

## DIAGNOSIS

### Recommendation

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

The water content is negligible. There is no bacteria or fungus (yeast and/or mold) present in the sample. The amount and size of particulates present in the system are acceptable. The system and fluid cleanliness is acceptable.

### 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			<b>WC05661873</b>	WC05624087	WC05602454
Sample Date	Client Info			<b>09 Oct 2022</b>	21 Aug 2022	26 Jul 2022
Machine Age	hrs	Client Info		<b>0</b>	0	0
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298		<b>0.837</b>	0.837	0.841
Fuel Color	text	*Visual Screen		<b>Red</b>	Red	Red
ASTM Color	scalar	*ASTM D1500		<b>L4.5</b>	L4.5	L5.0
Visc @ 40°C	cSt	ASTM D445		<b>2.18</b>	2.33	2.48
Pensky-Martens Flash Point	°C	*PMCC Calculated		<b>62</b>	63	68

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m		<b>0</b>	0	198
Sulfur (UVF)	ppm	ASTM D5453		<b>6</b>	7	148

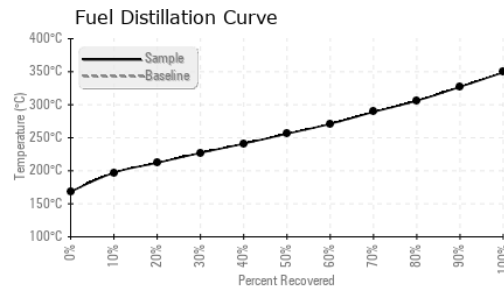
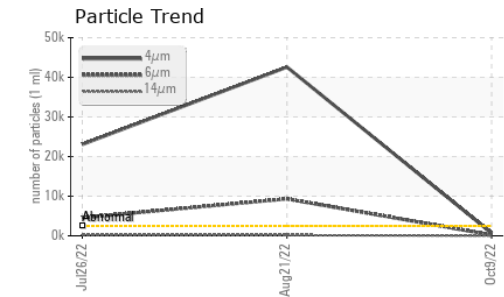
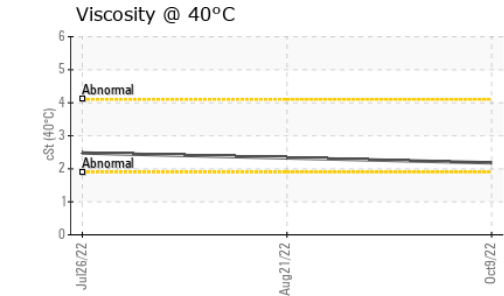
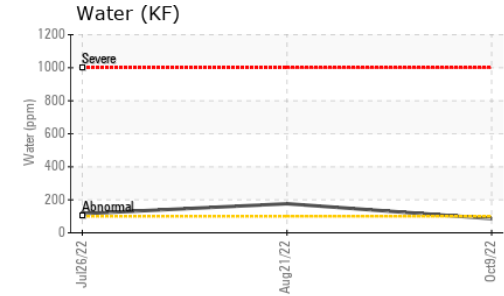
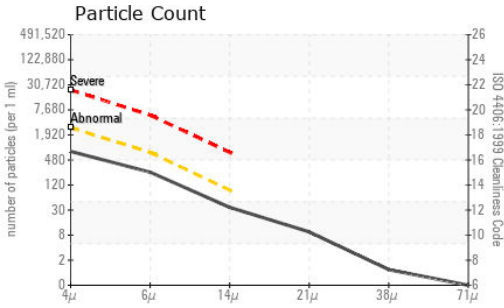
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		<b>168</b>	168	175
5% Distillation Point	°C	ASTM D86		<b>190</b>	189	195
10% Distill Point	°C	ASTM D86		<b>197</b>	198	203
15% Distillation Point	°C	ASTM D86		<b>205</b>	204	211
20% Distill Point	°C	ASTM D86		<b>212</b>	211	218
30% Distill Point	°C	ASTM D86		<b>227</b>	225	232
40% Distill Point	°C	ASTM D86		<b>241</b>	239	246
50% Distill Point	°C	ASTM D86		<b>256</b>	255	260
60% Distill Point	°C	ASTM D86		<b>271</b>	271	275
70% Distill Point	°C	ASTM D86		<b>289</b>	288	291
80% Distill Point	°C	ASTM D86		<b>306</b>	307	307
85% Distillation Point	°C	ASTM D86		<b>316</b>	317	316
90% Distill Point	°C	ASTM D86		<b>327</b>	327	327
95% Distillation Point	°C	ASTM D86		<b>341</b>	342	342
Final Boiling Point	°C	ASTM D86		<b>349</b>	349	349
Distillation Residue	%	ASTM D86		<b>1.4</b>	1.4	1.4
Distillation Loss	%	ASTM D86		<b>0.7</b>	0.8	0.8

IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777		<b>37.6</b>	37.6	36.8
Cetane Index		ASTM D4737	<40.0	<b>48.5</b>	48.4	48.1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	<b>0</b>	0	0
Sodium	ppm	ASTM D5185m	<0.1	<b>0</b>	0	0
Potassium	ppm	ASTM D5185m	<0.1	<b>0</b>	0	0
Water	%	ASTM D6304	<0.05	<b>0.008</b>	0.017	0.011
ppm Water	ppm	ASTM D6304	<500	<b>85.8</b>	176.2	116.0
% Gasoline	%	*In-House	<0.50	<b>0.0</b>	0.0	0.0
% Biodiesel	%	*In-House	<20.0	<b>4.4</b>	4.4	2.8



# FUEL REPORT



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC05661873  
**Lab Number** : 05661873  
**Unique Number** : 10166442  
**Test Package** : DF-2 ( Additional Tests: Screen )  
**Received** : 07 Oct 2022  
**Tested** : 14 Oct 2022  
**Diagnosed** : 14 Oct 2022 - Doug Bogart

**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)

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	<b>677</b>	▲ 42585	23059
Particles >6µm	ASTM D7647	>640	<b>215</b>	▲ 9327	4574
Particles >14µm	ASTM D7647	>80	<b>31</b>	▲ 165	232
Particles >21µm	ASTM D7647	>20	<b>8</b>	12	51
Particles >38µm	ASTM D7647	>4	<b>1</b>	1	2
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	<b>17/15/12</b>	▲ 23/20/15	22/19/15

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

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					