



FUEL REPORT

CORROSION	NORMAL
CONTAMINANTS	ATTENTION
FUEL CONDITION	NORMAL

Machine Id
RIBBON

Component
Diesel Fuel

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

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.

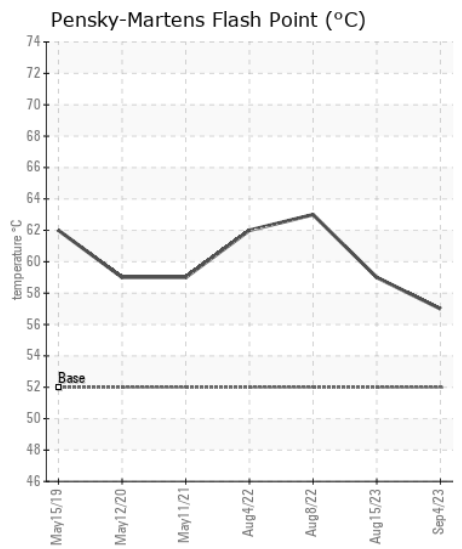
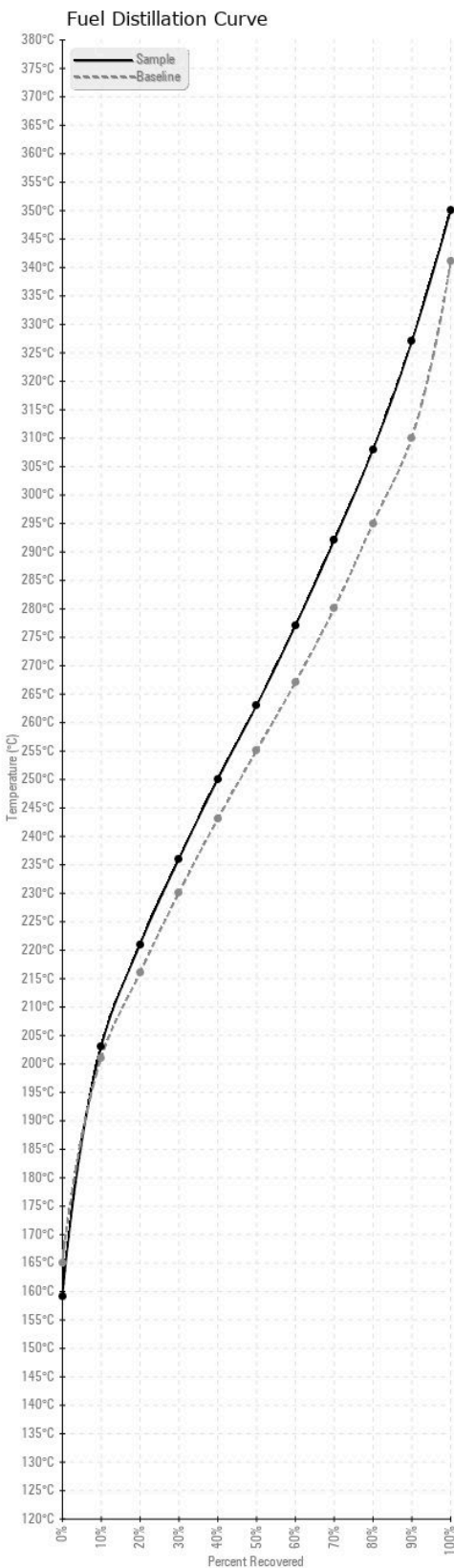
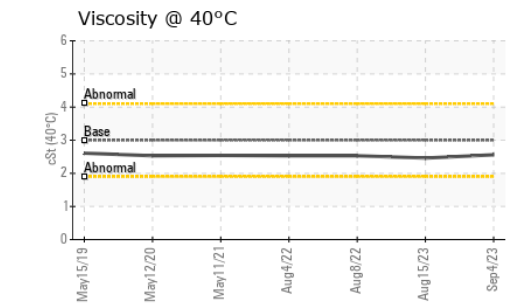
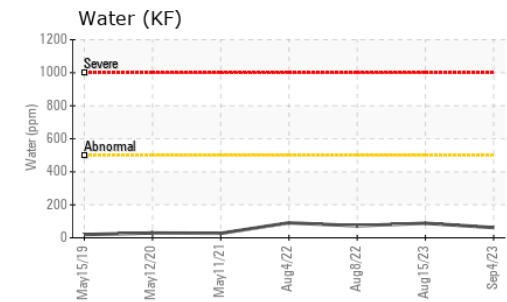
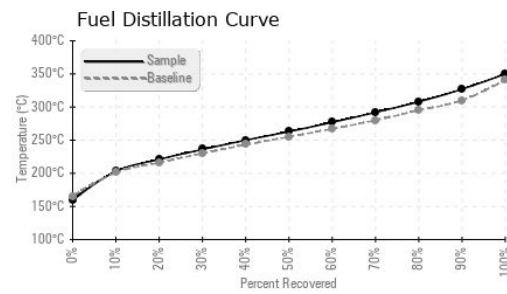
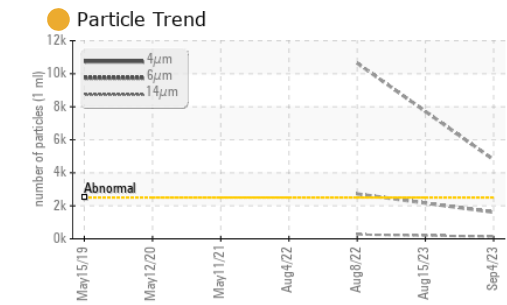
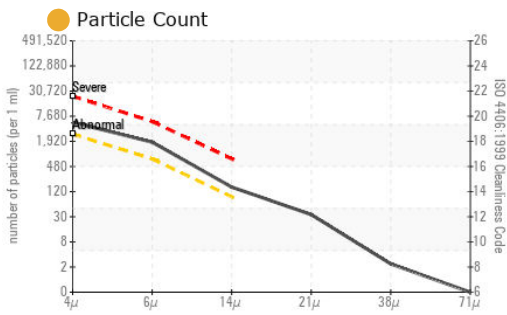
CONTAMINANTS

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC05941683	WC05925215	WC05611798
Sample Date		Client Info		04 Sep 2023	15 Aug 2023	08 Aug 2022
Machine Age	hrs	Client Info		0	0	0
Sample Status				ATTENTION	ABNORMAL	NORMAL
Aluminum	ppm	ASTM D5185m	<0.1	<1	<1	0
Nickel	ppm	ASTM D5185m	<0.1	0	0	0
Lead	ppm	ASTM D5185m	<0.1	0	0	0
Vanadium	ppm	ASTM D5185m	<0.1	<1	0	0
Iron	ppm	ASTM D5185m	<0.1	0	<1	0
Silicon	ppm	ASTM D5185m	<1.0	<1	<1	0
Sodium	ppm	ASTM D5185m	<0.1	2	0	<1
Potassium	ppm	ASTM D5185m	<0.1	0	0	0
Water	%	ASTM D6304	<0.05	0.006	0.008	0.007
ppm Water	ppm	ASTM D6304	<500	62.0	88.4	72.7
Particles >4µm		ASTM D7647	>2500	4790	---	10642
Particles >6µm		ASTM D7647	>640	1607	---	2719
Particles >14µm		ASTM D7647	>80	136	---	257
Particles >21µm		ASTM D7647	>20	30	---	48
Particles >38µm		ASTM D7647	>4	2	---	3
Particles >71µm		ASTM D7647	>3	0	---	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	19/18/14	---	21/19/15
% Gasoline	%	*In-House	<0.50	0.0	0.0	0.0
% Biodiesel	%	*In-House	<20.0	2.4	2.0	1.7
Calcium	ppm	ASTM D5185m	<0.1	0	0	0
Magnesium	ppm	ASTM D5185m	<0.1	3	<1	0
Phosphorus	ppm	ASTM D5185m	<0.1	3	<1	0
Zinc	ppm	ASTM D5185m	<0.1	0	0	0
Specific Gravity		*ASTM D1298	0.839	0.845	0.841	0.842
Fuel Color	text	*Visual Screen	Yllow	Red	Red	Red
ASTM Color	scalar	*ASTM D1500		L4.0	L4.0	L4.0
Visc @ 40°C	cSt	ASTM D445	3.0	2.56	2.46	2.53
Pensky-Martens Flash Point	°C	*PMCC Calculated	52	57	59	63
Sulfur	ppm	ASTM D5185m	10	0	0	0
Sulfur (UVF)	ppm	ASTM D5453		11	12	10
Initial Boiling Point	°C	ASTM D86	165	159	165	163
10% Distill Point	°C	ASTM D86	201	203	200	203
20% Distill Point	°C	ASTM D86	216	221	217	220
30% Distill Point	°C	ASTM D86	230	236	232	234
40% Distill Point	°C	ASTM D86	243	250	246	247
50% Distill Point	°C	ASTM D86	255	263	260	261
60% Distill Point	°C	ASTM D86	267	277	275	275
70% Distill Point	°C	ASTM D86	280	292	291	290
80% Distill Point	°C	ASTM D86	295	308	308	306
90% Distill Point	°C	ASTM D86	310	327	328	327
Final Boiling Point	°C	ASTM D86	341	350	351	349
Distillation Residue	%	ASTM D86	3.0	1.4	1.4	1.4
Distillation Loss	%	ASTM D86	3.0	0.4	0.7	0.7
API Gravity		ASTM D7777	37.7	36.0	36.8	36.6
Cetane Index		ASTM D4737	<40.0	47.3	47.9	48.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC05941683
Lab Number : 05941683
Unique Number : 10632295
Test Package : DF-2 (Additional Tests: Screen)

Received : 01 Sep 2023
Tested : 21 Sep 2023
Diagnosed : 21 Sep 2023 - Doug Bogart

COUCH OIL COMPANY
 2907 HILLSBOROUGH RD
 DURHAM, NC
 US 27705

Contact: JESSE BROWN
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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)

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