



FUEL REPORT

CORROSION	NORMAL
CONTAMINANTS	ATTENTION
FUEL CONDITION	NORMAL

Machine Id
DUKE NORTH DT 1

Component
Diesel Fuel

Fluid
No.2 DIESEL FUEL (LOW-SULPHUR) (--- GAL)

RECOMMENDATION

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.

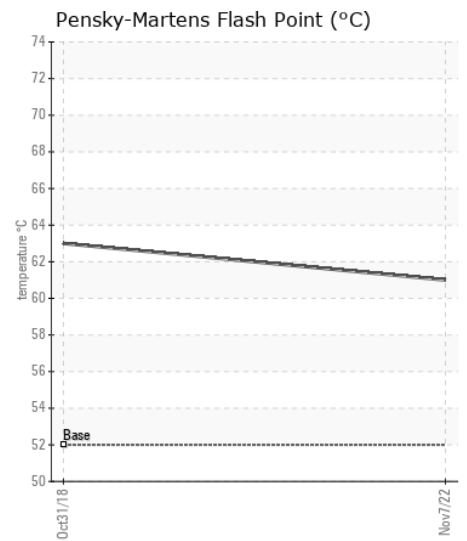
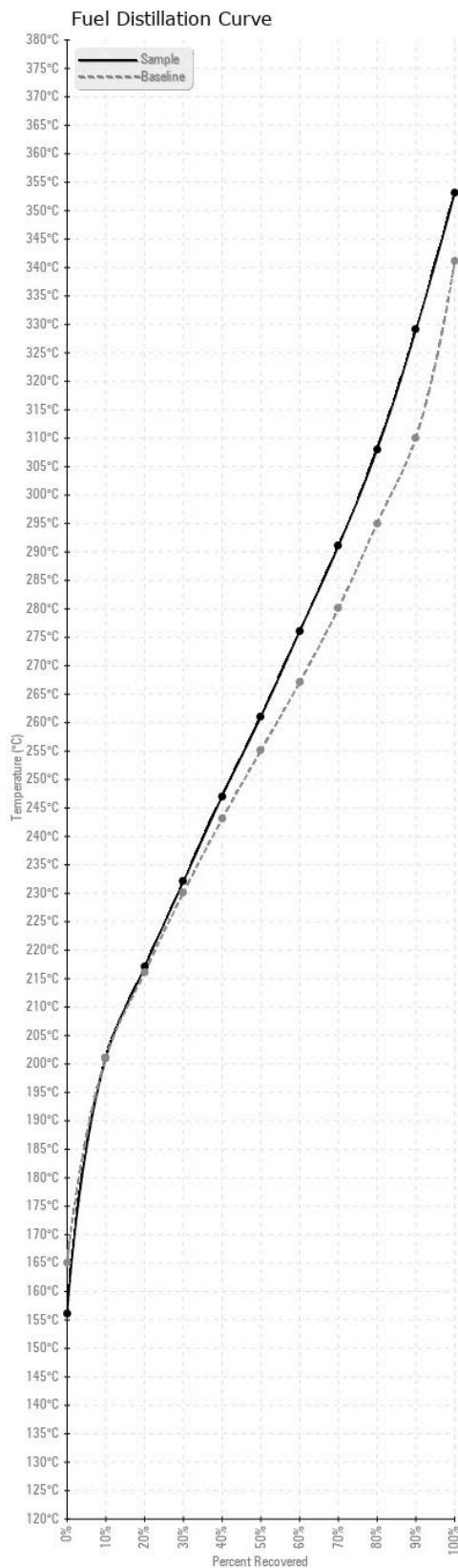
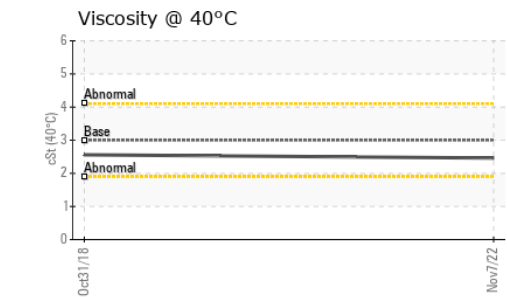
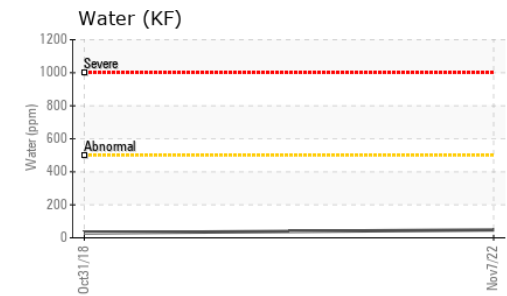
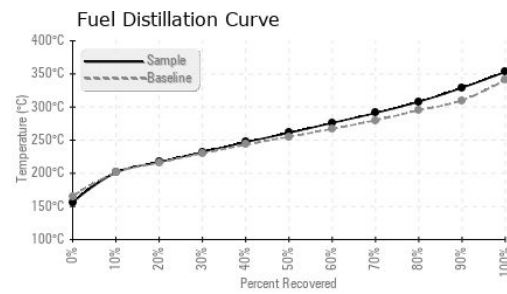
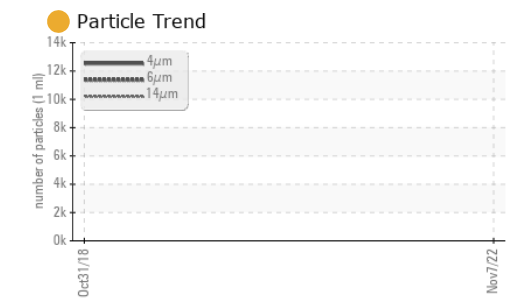
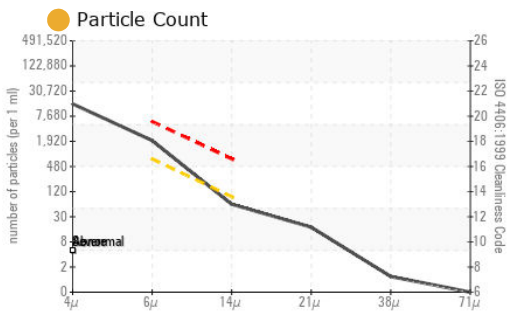
CONTAMINANTS

There is a high amount of silt (particulates < 14 microns in size) 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC05687553	WC04583513	---
Sample Date		Client Info		07 Nov 2022	31 Oct 2018	---
Machine Age	hrs	Client Info		0	0	---
Sample Status				ATTENTION	NORMAL	---
Aluminum	ppm	ASTM D5185m	<0.1	0	0	---
Nickel	ppm	ASTM D5185m	<0.1	0	0	---
Lead	ppm	ASTM D5185m	<0.1	0	<1	---
Vanadium	ppm	ASTM D5185m	<0.1	0	0	---
Iron	ppm	ASTM D5185m	<0.1	<1	0	---
Silicon	ppm	ASTM D5185m	<1.0	0	0	---
Sodium	ppm	ASTM D5185m	<0.1	0	<1	---
Potassium	ppm	ASTM D5185m	<0.1	0	0	---
Water	%	ASTM D6304	<0.05	0.004	0.003	---
ppm Water	ppm	ASTM D6304	<500	48.0	30	---
Particles >4µm		ASTM D7647		13147	---	---
Particles >6µm		ASTM D7647	>640	1759	---	---
Particles >14µm		ASTM D7647	>80	53	---	---
Particles >21µm		ASTM D7647	>20	15	---	---
Particles >38µm		ASTM D7647	>4	1	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>-/16/13	21/18/13	---	---
% Gasoline	%	*In-House	<0.50	0.0	0.0	---
% Biodiesel	%	*In-House	<20.0	0.0	0.0	---
Calcium	ppm	ASTM D5185m	<0.1	0	0	---
Magnesium	ppm	ASTM D5185m	<0.1	0	0	---
Phosphorus	ppm	ASTM D5185m	<0.1	0	0	---
Zinc	ppm	ASTM D5185m	<0.1	0	<1	---
Specific Gravity		*ASTM D1298	0.839	0.842	0.842	---
Fuel Color	text	*Visual Screen	Yllow	Red	Red	---
ASTM Color	scalar	*ASTM D1500		L4.5	L5.5	---
Visc @ 40°C	cSt	ASTM D445	3.0	2.46	2.56	---
Pensky-Martens Flash Point	°C	*PMCC Calculated	52	61	63	---
Sulfur	ppm	ASTM D5185m	250	0	37	---
Sulfur (UVF)	ppm	ASTM D5453		8	44	---
Initial Boiling Point	°C	ASTM D86	165	156	162	---
10% Distill Point	°C	ASTM D86	201	201	203	---
20% Distill Point	°C	ASTM D86	216	217	219	---
30% Distill Point	°C	ASTM D86	230	232	234	---
40% Distill Point	°C	ASTM D86	243	247	248	---
50% Distill Point	°C	ASTM D86	255	261	261	---
60% Distill Point	°C	ASTM D86	267	276	275	---
70% Distill Point	°C	ASTM D86	280	291	289	---
80% Distill Point	°C	ASTM D86	295	308	305	---
90% Distill Point	°C	ASTM D86	310	329	326	---
Final Boiling Point	°C	ASTM D86	341	353	350	---
Distillation Residue	%	ASTM D86	3.0	1.4	1.4	---
Distillation Loss	%	ASTM D86	3.0	0.7	0.9	---
API Gravity		ASTM D7777	37.7	36.6	36.6	---
Cetane Index		ASTM D4737	<40.0	48.0	47.9	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC05687553
Lab Number : 05687553
Unique Number : 10207125
Test Package : DF-2 (Additional Tests: Screen)

Received : 07 Nov 2022
Tested : 14 Nov 2022
Diagnosed : 17 Nov 2022 - 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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