



FUEL REPORT

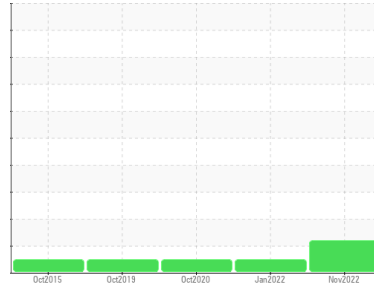
Sample Rating Trend

ISO



Area
HOSPITAL
Machine Id
DUKE NORTH GEN 5 DAY TANK

Component
Diesel Fuel
Fluid
No.2 DIESEL FUEL (LOW-SULPHUR) (100 GAL)



DIAGNOSIS

Recommendation

No corrective action is recommended at this time. 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 moderate 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC05687558	WC05437431	WC05088158
Sample Date	Client Info			07 Nov 2022	04 Jan 2022	11 Oct 2020
Machine Age	hrs	Client Info		0	0	0
Sample Status				ATTENTION	NORMAL	NORMAL

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298	0.839	0.842	0.841	0.845
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	2.56	2.46	2.68
Pensky-Martens Flash Point	°C	*PMCC Calculated	52	62	61	77

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m	250	0	28	42
Sulfur (UVF)	ppm	ASTM D5453		9	31	42

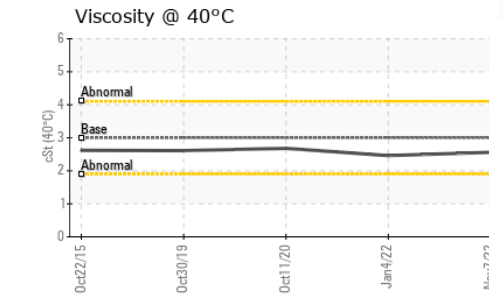
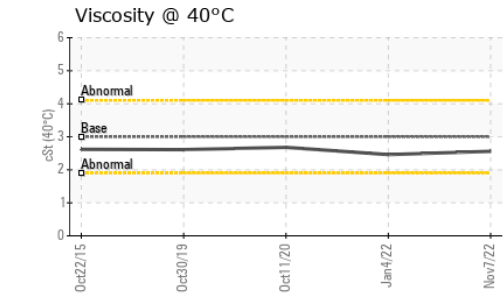
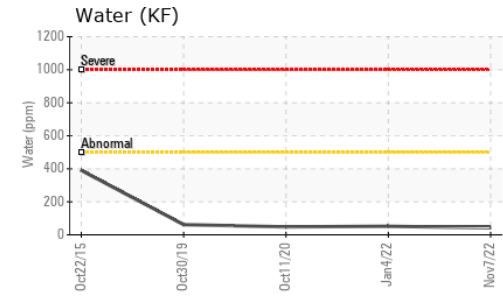
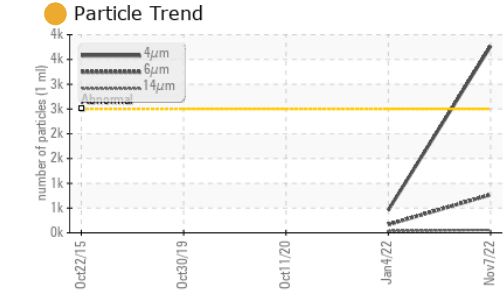
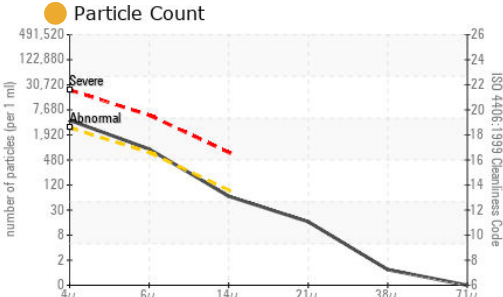
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86	165	164	161	185
5% Distillation Point	°C	ASTM D86		191	189	205
10% Distill Point	°C	ASTM D86	201	202	200	212
15% Distillation Point	°C	ASTM D86		211	209	220
20% Distill Point	°C	ASTM D86	216	219	218	227
30% Distill Point	°C	ASTM D86	230	233	232	238
40% Distill Point	°C	ASTM D86	243	247	246	251
50% Distill Point	°C	ASTM D86	255	261	261	264
60% Distill Point	°C	ASTM D86	267	276	275	278
70% Distill Point	°C	ASTM D86	280	291	291	292
80% Distill Point	°C	ASTM D86	295	308	307	307
85% Distillation Point	°C	ASTM D86		317	316	316
90% Distill Point	°C	ASTM D86	310	328	327	327
95% Distillation Point	°C	ASTM D86		345	343	343
Final Boiling Point	°C	ASTM D86	341	352	350	350
Distillation Residue	%	ASTM D86	3.0	1.4	1.4	1.4
Distillation Loss	%	ASTM D86	3.0	0.7	0.6	0.7

IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777	37.7	36.6	36.8	36.0
Cetane Index		ASTM D4737	<40.0	48.0	48.1	48.2

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	0	0	0
Sodium	ppm	ASTM D5185m	<0.1	0	0	0
Potassium	ppm	ASTM D5185m	<0.1	0	0	1
Water	%	ASTM D6304	<0.05	0.004	0.005	0.004
ppm Water	ppm	ASTM D6304	<500	42.4	51.8	48.0
% Gasoline	%	*In-House	<0.50	0.0	0.0	0.0
% Biodiesel	%	*In-House	<20.0	0.0	1.2	1.0



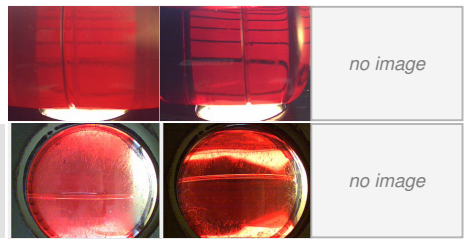
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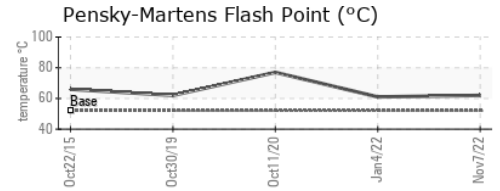
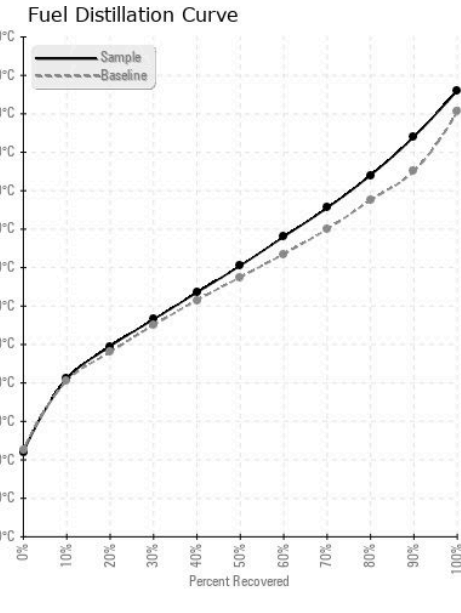
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	3770	458	---
Particles >6µm	ASTM D7647	>640	771	167	---
Particles >14µm	ASTM D7647	>80	57	35	---
Particles >21µm	ASTM D7647	>20	14	13	---
Particles >38µm	ASTM D7647	>4	1	1	---
Particles >71µm	ASTM D7647	>3	0	0	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	19/17/13	16/15/12	---

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	<1
Lead	ppm	ASTM D5185m <0.1	0	0	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	0	1	<1
Zinc	ppm	ASTM D5185m <0.1	0	0	<1

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC05687558 **Received** : 07 Nov 2022
Lab Number : **05687558** **Tested** : 14 Nov 2022
Unique Number : 10207130 **Diagnosed** : 15 Nov 2022 - Doug Bogart
Test Package : DF-2 (Additional Tests: Screen)

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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)