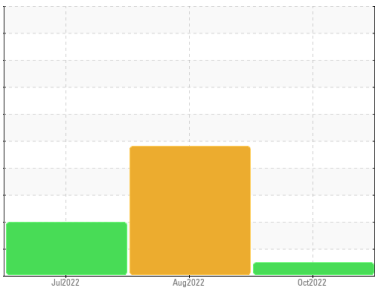
FUEL REPORT

Sample Rating Trend



NORMAL

Area
HOSPITAL
Machine Id
DUKE GEN HUB 30K TANK 1
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		**WC05661874**	WC05624086	WC05602456
Sample Date		Client Info		**09 Oct 2022**	21 Aug 2022	26 Jul 2022
Machine Age	hrs	Client Info		**0**	0	0
Sample Status				**NORMAL**	ABNORMAL	ABNORMAL

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298		**0.838**	0.838	0.841
Fuel Color	text	*Visual Screen		**Red**	Red	Red
ASTM Color	scalar	*ASTM D1500		**L4.5**	L5.0	L4.5
Visc @ 40°C	cSt	ASTM D445		**2.41**	2.41	2.48
Pensky-Martens Flash Point	°C	*PMCC Calculated		**61**	63	68

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m		**0**	0	179
Sulfur (UVF)	ppm	ASTM D5453		**7**	8	139

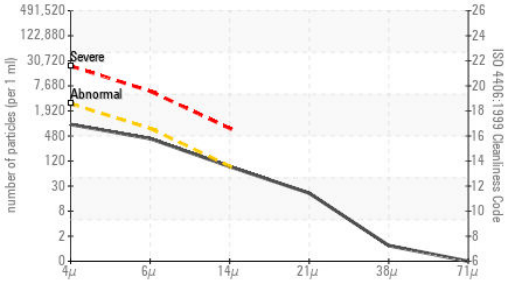
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		**167**	168	173
5% Distillation Point	°C	ASTM D86		**191**	190	195
10% Distill Point	°C	ASTM D86		**199**	198	203
15% Distillation Point	°C	ASTM D86		**207**	204	210
20% Distill Point	°C	ASTM D86		**213**	211	218
30% Distill Point	°C	ASTM D86		**227**	226	231
40% Distill Point	°C	ASTM D86		**241**	241	245
50% Distill Point	°C	ASTM D86		**256**	256	260
60% Distill Point	°C	ASTM D86		**272**	272	275
70% Distill Point	°C	ASTM D86		**288**	289	290
80% Distill Point	°C	ASTM D86		**307**	307	307
85% Distillation Point	°C	ASTM D86		**317**	317	316
90% Distill Point	°C	ASTM D86		**327**	328	327
95% Distillation Point	°C	ASTM D86		**341**	342	342
Final Boiling Point	°C	ASTM D86		**348**	349	350
Distillation Residue	%	ASTM D86		**1.4**	1.4	1.4
Distillation Loss	%	ASTM D86		**0.8**	0.8	0.7

IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777		**37.4**	37.4	36.8
Cetane Index		ASTM D4737	<40.0	**48.6**	48.5	48.2

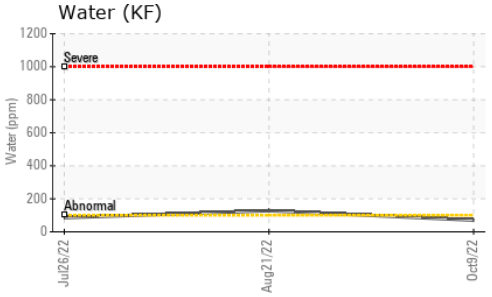
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	**0**	0	0
Sodium	ppm	ASTM D5185m	<0.1	**0**	0	0
Potassium	ppm	ASTM D5185m	<0.1	**0**	0	0
Water	%	ASTM D6304	<0.05	**0.007**	0.012	0.008
ppm Water	ppm	ASTM D6304	<500	**70.8**	128.1	85.9
% Gasoline	%	*In-House	<0.50	**0.0**	0.0	0.0
% Biodiesel	%	*In-House	<20.0	**4.1**	4.0	3.0

FUEL REPORT

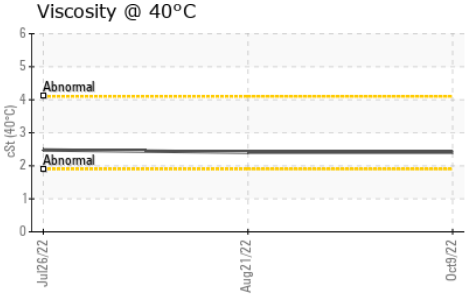
Particle Count



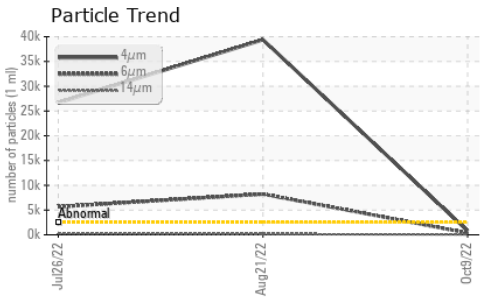
Water (KF)



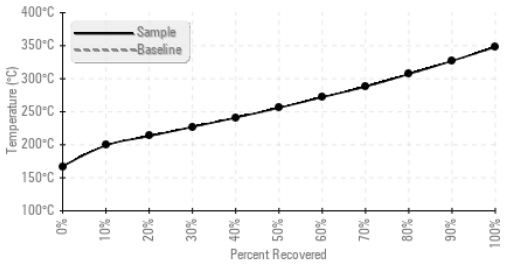
Viscosity @ 40°C



Particle Trend

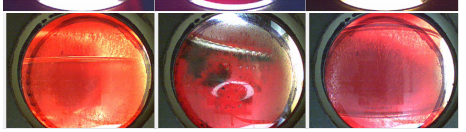


Fuel Distillation Curve



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	**796**	▲ 39386	▲ 26656
Particles >6µm		ASTM D7647	>640	**364**	▲ 8230	▲ 5655
Particles >14µm		ASTM D7647	>80	**78**	▲ 132	▲ 275
Particles >21µm		ASTM D7647	>20	**18**	7	▲ 56
Particles >38µm		ASTM D7647	>4	**1**	0	3
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	**17/16/13**	▲ 22/20/14	▲ 22/20/15

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	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**	0	0
Calcium	ppm	ASTM D5185m	<0.1	**0**	0	0
Magnesium	ppm	ASTM D5185m	<0.1	**0**	0	0
Phosphorus	ppm	ASTM D5185m	<0.1	**0**	0	2
Zinc	ppm	ASTM D5185m	<0.1	**0**	0	0

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC05661874 **Received** : 07 Oct 2022
Lab Number : 05661874 **Tested** : 14 Oct 2022
Unique Number : 10166443 **Diagnosed** : 14 Oct 2022 - Doug Bogart
Test Package : DF-2 (Additional Tests: Screen)

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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