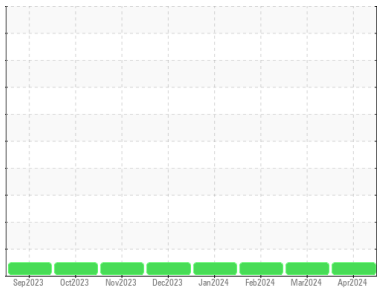
FUEL REPORT

Sample Rating Trend



NORMAL

Machine Id
IDEM FOD 11
Component
Diesel Fuel
Fluid
No.2 DIESEL FUEL (ULTRALOW SULPHUR) (--- GAL)

DIAGNOSIS

Recommendation
ASTM D240 result 18,802 BTU/lb. Test performed at subcontracted ISO 17025 laboratory. 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 no bacteria or fungus (yeast and/or mold) indicated in the sample. The water content is negligible. The amount and size of particulates present in the system are 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		**WC0934833**	WC0926731	WC0911758
Sample Date		Client Info		**15 Apr 2024**	15 Mar 2024	15 Feb 2024
Machine Age	hrs	Client Info		**0**	0	0
Sample Status				**NORMAL**	NORMAL	NORMAL

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298	0.839	**---**	0.854	0.852
Specific Gravity		*ASTM D1298		**0.854**	0.854	---
Fuel Color	text	*Visual Screen	Yllow	**Red**	Red	Red
ASTM Color	scalar	*ASTM D1500		**L4.0**	L4.5	L4.5
Visc @ 40°C	cSt	ASTM D445	3.0	**2.57**	2.49	2.53
Pensky-Martens Flash Point	°C	*PMCC Calculated	52	**61.8**	61.3	62
Cloud Point	°C	ASTM D5771		**-19**	-19	-19
Pour Point	°C	ASTM D5950		**-29**	-30	-28

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m	10	**0**	0	0
Sulfur (UVF)	ppm	ASTM D5453		**10**	8	5

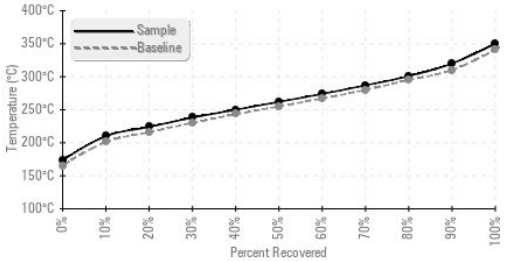
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86	165	**173**	167	171
5% Distillation Point	°C	ASTM D86		**200**	195	199
10% Distill Point	°C	ASTM D86	201	**210**	206	210
15% Distillation Point	°C	ASTM D86		**217**	215	220
20% Distill Point	°C	ASTM D86	216	**224**	223	225
30% Distill Point	°C	ASTM D86	230	**238**	235	239
40% Distill Point	°C	ASTM D86	243	**250**	247	251
50% Distill Point	°C	ASTM D86	255	**262**	259	262
60% Distill Point	°C	ASTM D86	267	**274**	273	274
70% Distill Point	°C	ASTM D86	280	**287**	286	286
80% Distill Point	°C	ASTM D86	295	**301**	302	300
85% Distillation Point	°C	ASTM D86		**311**	311	309
90% Distill Point	°C	ASTM D86	310	**320**	322	319
95% Distillation Point	°C	ASTM D86		**336**	339	335
Final Boiling Point	°C	ASTM D86	341	**350**	351	346
Distillation Residue	%	ASTM D86	3.0	**---**	1.4	1.4
Distillation Loss	%	ASTM D86	3.0	**---**	0.6	0.5

IGNITION QUALITY	method	limit/base	current	history1	history2
API Gravity	ASTM D7777	37.7	**34**	34.2	34.6
Cetane Index	ASTM D4737	<40.0	**44**	43.5	44.7

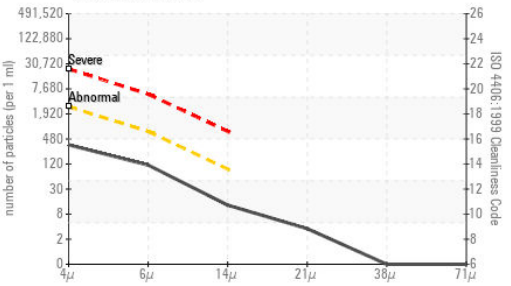
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	**0**	0	0
Sodium	ppm	ASTM D5185m	<0.1	**<1**	2	<1
Potassium	ppm	ASTM D5185m	<0.1	**0**	<1	<1
Water	%	ASTM D6304	<0.05	**0.002**	0.002	0.002
ppm Water	ppm	ASTM D6304	<500	**19**	25	25
% Gasoline	%	*In-House	<0.50	**0.0**	0.0	0.0
% Biodiesel	%	*In-House	<20.0	**0.0**	0.0	0.0

FUEL REPORT

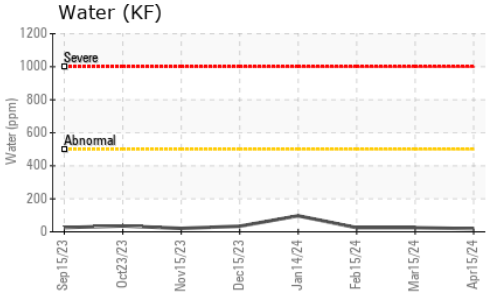
Fuel Distillation Curve



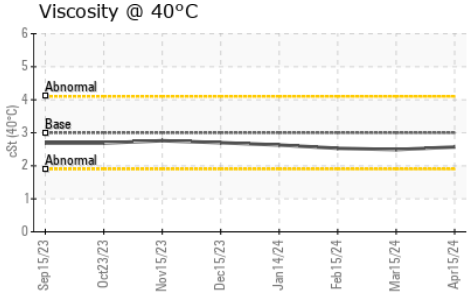
Particle Count



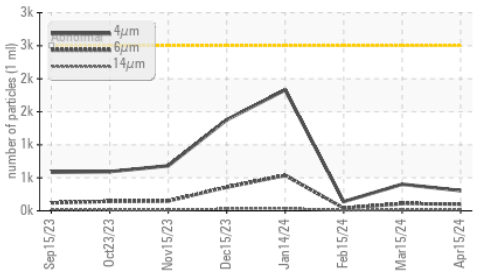
Water (KF)



Viscosity @ 40°C



Particle Trend



FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	**306**	402	139
Particles >6µm		ASTM D7647	>640	**100**	109	42
Particles >14µm		ASTM D7647	>80	**11**	12	7
Particles >21µm		ASTM D7647	>20	**3**	4	2
Particles >38µm		ASTM D7647	>4	**0**	0	0
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	**15/14/11**	16/14/11	14/13/10

HEAVY METALS		method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m	<0.1	**0**	0	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	**0**	<1	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	0
Phosphorus	ppm	ASTM D5185m	<0.1	**2**	0	<1
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. : WC0934833 **Received** : 19 Apr 2024
Lab Number : 06155025 **Tested** : 01 May 2024
Unique Number : 10990448 **Diagnosed** : 01 May 2024 - Doug Bogart
Test Package : DF-3 (Additional Tests: Fuel, 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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