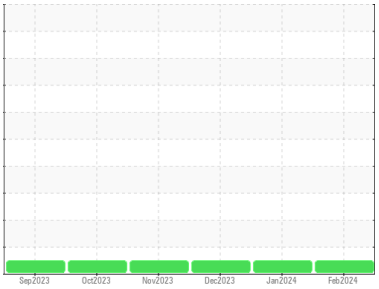
FUEL REPORT

Sample Rating Trend



NORMAL

Machine Id
IDEM FODT 6
Component
Diesel Fuel
Fluid
DIESEL FUEL No. 2 (--- GAL)

DIAGNOSIS

Recommendation
ASTM D240 result 18,900 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		**WC0911757**	WC0901677	WC0892751
Sample Date		Client Info		**15 Feb 2024**	14 Jan 2024	15 Dec 2023
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		**0.862**	0.863	0.862
Fuel Color	text	*Visual Screen		**Red**	Red	Red
ASTM Color	scalar	*ASTM D1500		**L4.5**	L5.5	L5.0
Visc @ 40°C	cSt	ASTM D445	4.1	**2.64**	2.62	2.7
Pensky-Martens Flash Point	°C	*PMCC Calculated		**60**	59	59
Cloud Point	°C	ASTM D5771		**-23**	-23	-23
Pour Point	°C	ASTM D5950		**-36**	-35	-37

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m		**6**	4	14
Sulfur (UVF)	ppm	ASTM D5453		**14**	13	14

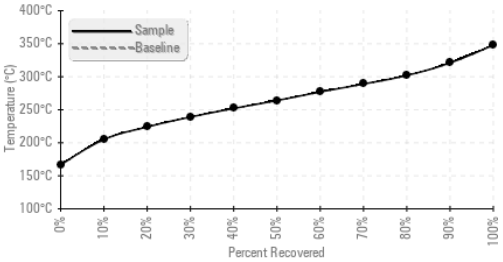
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		**166**	166	165
5% Distillation Point	°C	ASTM D86		**193**	193	192
10% Distill Point	°C	ASTM D86		**205**	205	206
15% Distillation Point	°C	ASTM D86		**216**	216	216
20% Distill Point	°C	ASTM D86		**224**	224	225
30% Distill Point	°C	ASTM D86		**239**	240	239
40% Distill Point	°C	ASTM D86		**252**	253	252
50% Distill Point	°C	ASTM D86		**264**	265	264
60% Distill Point	°C	ASTM D86		**277**	276	276
70% Distill Point	°C	ASTM D86		**289**	289	289
80% Distill Point	°C	ASTM D86		**302**	303	303
85% Distillation Point	°C	ASTM D86		**311**	311	311
90% Distill Point	°C	ASTM D86		**321**	321	321
95% Distillation Point	°C	ASTM D86		**337**	337	338
Final Boiling Point	°C	ASTM D86		**348**	348	349
Distillation Residue	%	ASTM D86		**1.4**	1.4	1.4
Distillation Loss	%	ASTM D86		**0.6**	0.8	0.6

IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777		**32.7**	32.5	32.7
Cetane Index		ASTM D4737	<40.0	**41.0**	41.0	41.1

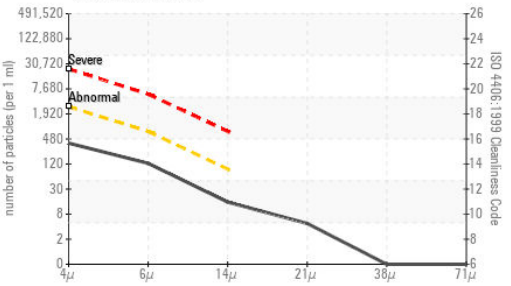
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	**0**	0	0
Sodium	ppm	ASTM D5185m	<0.1	**<1**	<1	<1
Potassium	ppm	ASTM D5185m	<0.1	**<1**	<1	0
Water	%	ASTM D6304	<0.05	**0.003**	0.008	0.004
ppm Water	ppm	ASTM D6304	<500	**29**	83	46
% Gasoline	%	*In-House	<0.50	**0.0**	0.0	0.0
% Biodiesel	%	*In-House	<20.0	**0.0**	0.0	0.0

FUEL REPORT

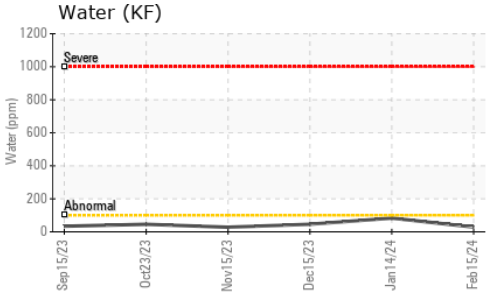
Fuel Distillation Curve



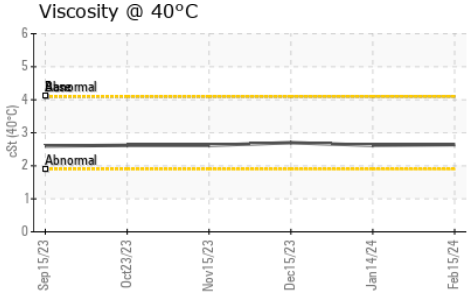
Particle Count



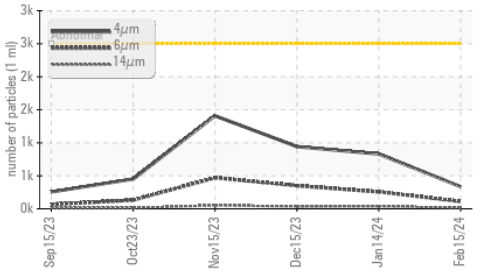
Water (KF)



Viscosity @ 40°C

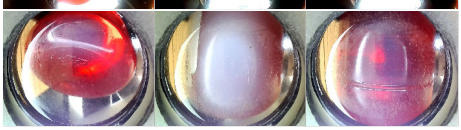


Particle Trend



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	**336**	831	942
Particles >6µm	ASTM D7647	>640	**110**	257	350
Particles >14µm	ASTM D7647	>80	**13**	39	35
Particles >21µm	ASTM D7647	>20	**4**	15	10
Particles >38µm	ASTM D7647	>4	**0**	1	1
Particles >71µm	ASTM D7647	>3	**0**	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	**16/14/11**	17/15/12	17/16/12

HEAVY METALS		method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m	<0.1	**0**	0	0
Nickel	ppm	ASTM D5185m	<0.1	**0**	<1	0
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	**<1**	1	0
Magnesium	ppm	ASTM D5185m	<0.1	**0**	1	0
Phosphorus	ppm	ASTM D5185m	<0.1	**0**	0	0
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. : WC0911757
Lab Number : 06097352
Unique Number : 10890205
Test Package : DF-3 (Additional Tests: Screen)

Received : 22 Feb 2024
Tested : 12 Mar 2024
Diagnosed : 12 Mar 2024 - Doug Bogart

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)

PETROLEUM TECHNOLOGIES GROUP
4665 BROADMOOR AVE, SUITE 150
GRAND RAPIDS, MI
US 49512
Contact: JAMES KRAFT
james@oil-lab.com
T: (616)698-9399
F: