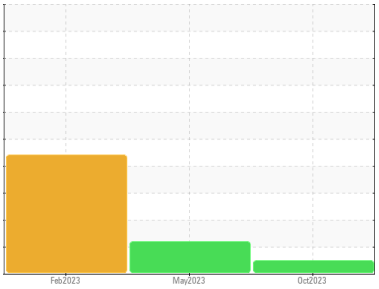
FUEL REPORT

Sample Rating Trend



NORMAL

Machine Id
MIDSHIPCRANE
Component
Diesel Fuel
Fluid
No.2 DIESEL FUEL (LOW-SULPHUR) (--- GAL)

DIAGNOSIS

Recommendation
Laboratory test indicate that this fuel is suitable for use and meets all test requirements. Resample at the next service interval to monitor.

Corrosion
{not applicable}

Contaminants
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. There is no indication of any contamination in the diesel fuel.

Fuel Condition
All laboratory tests indicate that this sample meets specifications for No.2 diesel fuel, low sulfur (US EPA/CGSB-3.517-3 type B).

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PC**	PC	PC
Sample Date		Client Info		**05 Oct 2023**	06 May 2023	05 Feb 2023
Machine Age	hrs	Client Info		**0**	0	0
Sample Status				**NORMAL**	ATTENTION	SEVERE

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		ASTM D1298*	0.839	**0.843**	0.844	0.856
Fuel Color	text	Visual Screen*	Yllow	**Yllow**	Red	Purpl
Visc @ 40°C	cSt	ASTM D7279(m)	3.0	**2.8**	3	3.9
Pensky-Martens Flash Point	°C	ASTM D7215*	52	**62.3**	63.3	67.3

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185(m)	250	**20**	124	406

DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D2887*	165	**173**	174	177
5% Distillation Point	°C	ASTM D2887*		**197**	197	203
10% Distill Point	°C	ASTM D2887*	201	**209**	209	217
15% Distillation Point	°C	ASTM D2887*		**218**	218	228
20% Distill Point	°C	ASTM D2887*	216	**227**	227	239
30% Distill Point	°C	ASTM D2887*	230	**242**	243	259
40% Distill Point	°C	ASTM D2887*	243	**255**	258	277
50% Distill Point	°C	ASTM D2887*	255	**268**	272	294
60% Distill Point	°C	ASTM D2887*	267	**281**	287	313
70% Distill Point	°C	ASTM D2887*	280	**294**	303	333
80% Distill Point	°C	ASTM D2887*	295	**309**	320	355
85% Distillation Point	°C	ASTM D2887*		**320**	333	369
90% Distill Point	°C	ASTM D2887*	310	**331**	346	383
95% Distillation Point	°C	ASTM D2887*		**350**	367	405
Final Boiling Point	°C	ASTM D2887*	341	**372**	387	420

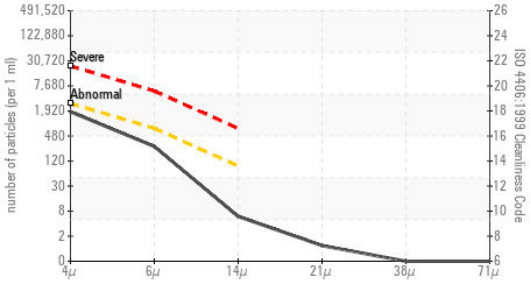
IGNITION QUALITY	method	limit/base	current	history1	history2
API Gravity	ASTM D1298*	37.7	**36**	36	33
Cetane Index	ASTM D4737*	<40.0	**49**	49	48

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	<1.0	**0**	0	0
Sodium	ppm	ASTM D5185(m)	<0.1	**0**	0	0
Potassium	ppm	ASTM D5185(m)	<0.1	**<1**	0	0
Water	%	ASTM D6304*	<0.05	**0.004**	0.004	0.014
ppm Water	ppm	ASTM D6304*	<500	**44.3**	41.0	142.2

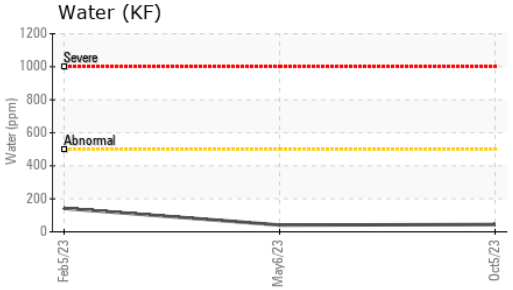
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	**1604**	▲ 3334	⬢ 24298
Particles >6µm		ASTM D7647	>640	**237**	▲ 781	⬢ 7174
Particles >14µm		ASTM D7647	>80	**5**	25	▲ 281
Particles >21µm		ASTM D7647	>20	**1**	4	▲ 51
Particles >38µm		ASTM D7647	>4	**0**	0	2
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>18/16/13	**18/15/10**	▲ 19/17/12	⬢ 22/20/15

FUEL REPORT

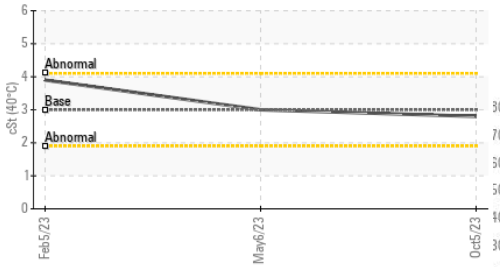
Particle Count



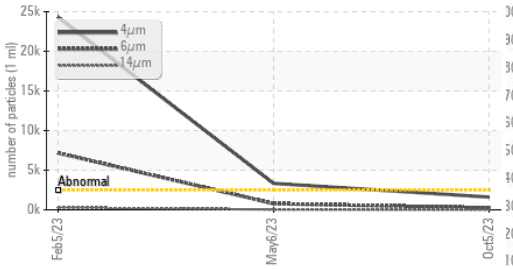
Water (KF)



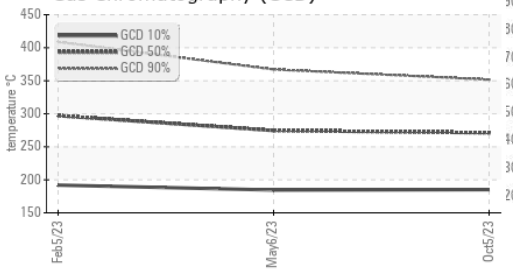
Viscosity @ 40°C



Particle Trend



Gas Chromatography (GCD)

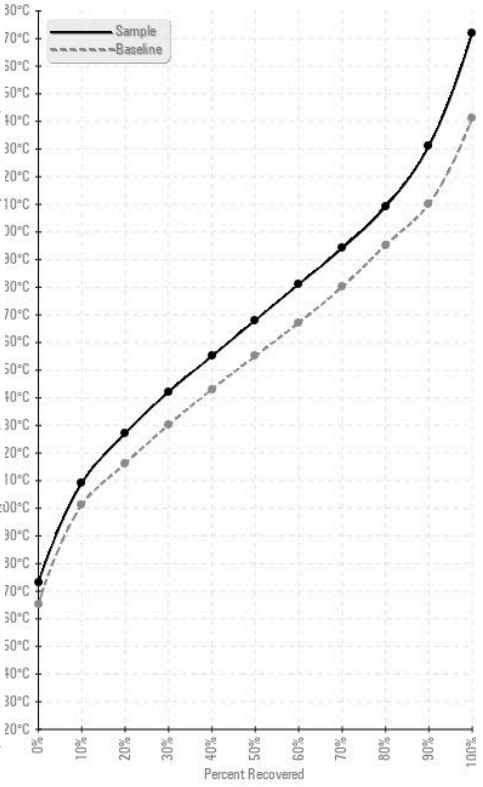


HEAVY METALS		method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185(m)	<0.1	**0**	0	0
Nickel	ppm	ASTM D5185(m)	<0.1	**0**	0	0
Lead	ppm	ASTM D5185(m)	<0.1	**0**	0	0
Vanadium	ppm	ASTM D5185(m)	<0.1	**0**	0	0
Iron	ppm	ASTM D5185(m)	<0.1	**<1**	<1	<1
Calcium	ppm	ASTM D5185(m)	<0.1	**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)	<0.1	**<1**	<1	<1
Phosphorus	ppm	ASTM D5185(m)	<0.1	**0**	<1	<1
Zinc	ppm	ASTM D5185(m)	<0.1	**0**	<1	<1

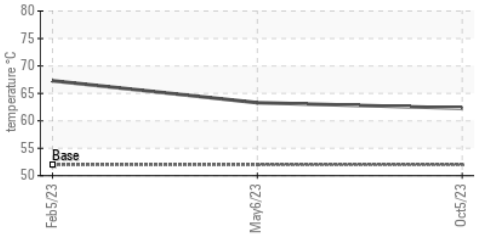
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

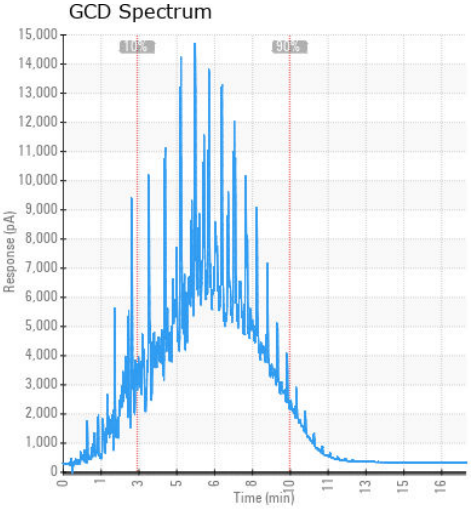
Fuel Distillation Curve



Pensky-Martens Flash Point (°C)



GCD Spectrum



CALA
ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Lab Number : 02590153
Unique Number : 5659219
Test Package : FUEL (Additional Tests: CC Flash, GC-PercFuel, PrtCount)
Received : 18 Oct 2023
Diagnosed : 23 Oct 2023
Diagnostician : Kevin Marson

To discuss this sample report, contact Customer Service at 1-800-268-2131.
Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
Validity of results and interpretation are based on the sample and information as supplied.

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