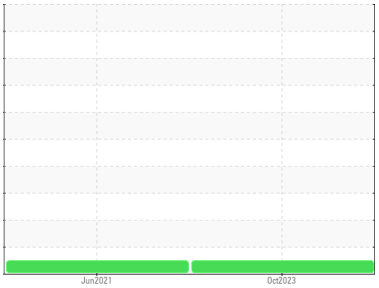
FUEL REPORT

Sample Rating Trend



NORMAL

Area
[132366]
Machine Id
WINDSOR HEADWORKS
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		**CU0020251**	CU0017398	---
Sample Date		Client Info		**03 Oct 2023**	03 Jun 2021	---
Machine Age	hrs	Client Info		**0**	0	---
Sample Status				**NORMAL**	NORMAL	---

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		ASTM D1298*	0.839	**0.842**	0.839	---
Fuel Color	text	Visual Screen*	Yllow	**Pink**	Pink	---
Visc @ 40°C	cSt	ASTM D7279(m)	3.0	**2.7**	2.1	---
Pensky-Martens Flash Point	°C	ASTM D7215*	52	**59.7**	57.8	---

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185(m)	250	**18**	4	---

DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D2887*	165	**170**	159	---
5% Distillation Point	°C	ASTM D2887*		**192**	183	---
10% Distill Point	°C	ASTM D2887*	201	**203**	192	---
15% Distillation Point	°C	ASTM D2887*		**211**	199	---
20% Distill Point	°C	ASTM D2887*	216	**219**	207	---
30% Distill Point	°C	ASTM D2887*	230	**234**	222	---
40% Distill Point	°C	ASTM D2887*	243	**246**	235	---
50% Distill Point	°C	ASTM D2887*	255	**259**	249	---
60% Distill Point	°C	ASTM D2887*	267	**272**	263	---
70% Distill Point	°C	ASTM D2887*	280	**285**	278	---
80% Distill Point	°C	ASTM D2887*	295	**300**	295	---
85% Distillation Point	°C	ASTM D2887*		**312**	306	---
90% Distill Point	°C	ASTM D2887*	310	**323**	321	---
95% Distillation Point	°C	ASTM D2887*		**343**	340	---
Final Boiling Point	°C	ASTM D2887*	341	**375**	366	---

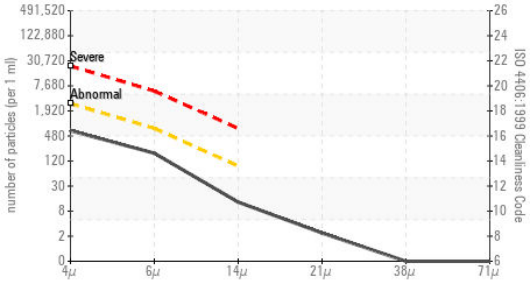
IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D1298*	37.7	**36**	37	---
Cetane Index		ASTM D4737*	<40.0	**47**	46	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	<1.0	**0**	<1	---
Sodium	ppm	ASTM D5185(m)	<0.1	**0**	<1	---
Potassium	ppm	ASTM D5185(m)	<0.1	**<1**	0	---
Water	%	ASTM D6304*	<0.05	**0.003**	0.002	---
ppm Water	ppm	ASTM D6304*	<500	**28.7**	20.0	---

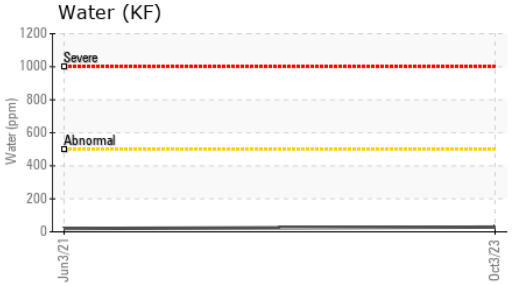
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	**565**	393	---
Particles >6µm		ASTM D7647	>640	**163**	97	---
Particles >14µm		ASTM D7647	>80	**11**	8	---
Particles >21µm		ASTM D7647	>20	**2**	2	---
Particles >38µm		ASTM D7647	>4	**0**	0	---
Particles >71µm		ASTM D7647	>3	**0**	0	---
Oil Cleanliness		ISO 4406 (c)	>18/16/13	**16/15/11**	16/14/10	---

FUEL REPORT

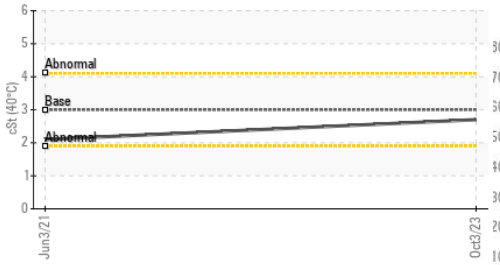
Particle Count



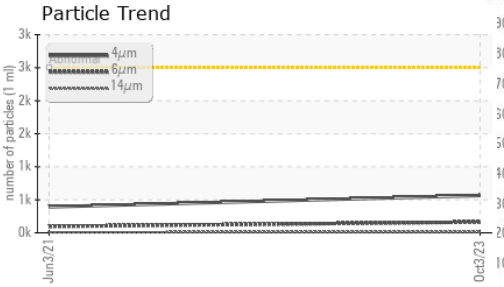
Water (KF)



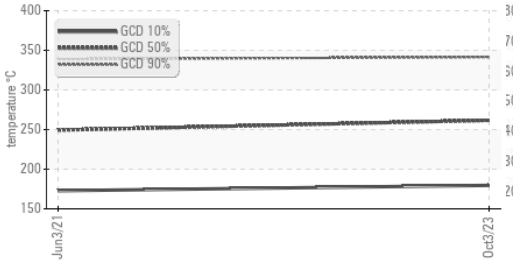
Viscosity @ 40°C



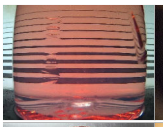
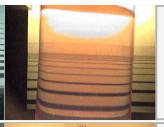
Particle Trend



Gas Chromatography (GCD)

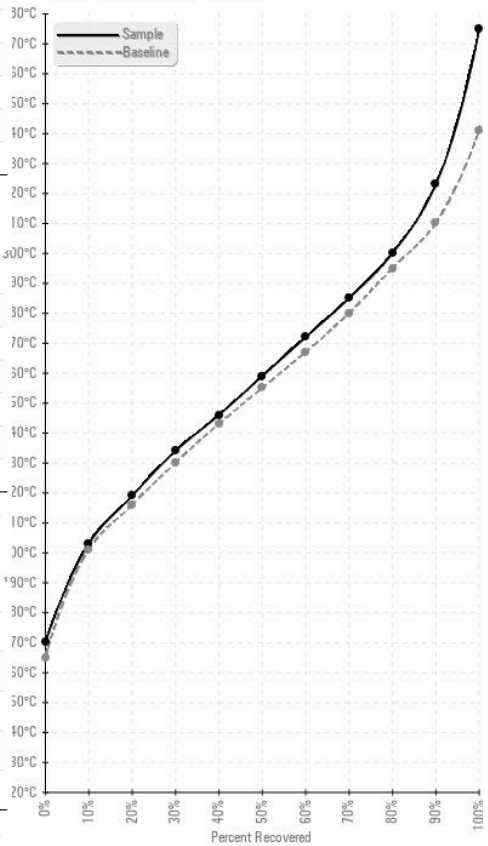


HEAVY METALS		method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185(m)	<0.1	**0**	0	---
Nickel	ppm	ASTM D5185(m)	<0.1	**0**	0	---
Lead	ppm	ASTM D5185(m)	<0.1	**0**	0	---
Vanadium	ppm	ASTM D5185(m)	<0.1	**0**	0	---
Iron	ppm	ASTM D5185(m)	<0.1	**<1**	<1	---
Calcium	ppm	ASTM D5185(m)	<0.1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

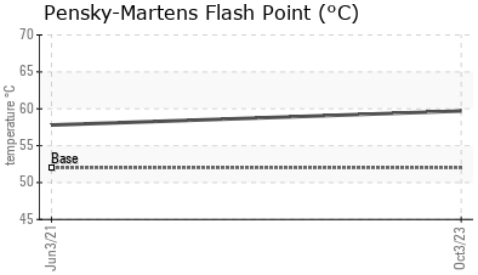
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					*no image*
Bottom					*no image*

GRAPHS

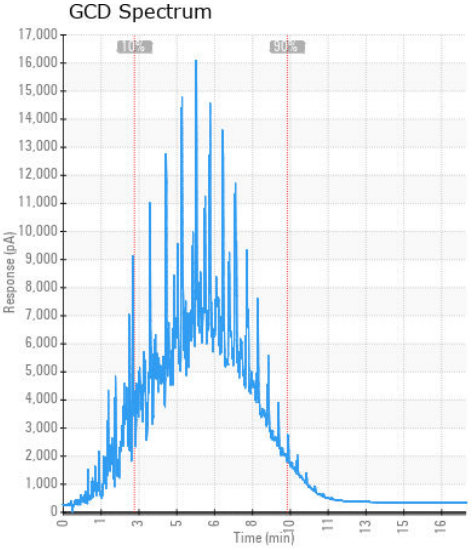
Fuel Distillation Curve



Pensky-Martens Flash Point (°C)



GCD Spectrum



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : CU0020251 **Received** : 04 Oct 2023
Lab Number : 02586952 **Diagnosed** : 10 Oct 2023
Unique Number : 5656018 **Diagnostician** : Kevin Marson
Test Package : FUEL (Additional Tests: CC Flash, GC-PercFuel, PrtCount)

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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