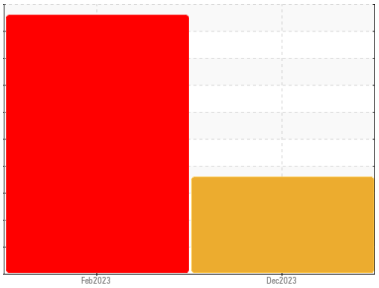
FUEL REPORT

Sample Rating Trend



ISO

Area
[1879916]
Machine Id
19-GRES-01-005-F
Component
Diesel Fuel
Fluid
No.2 DIESEL FUEL (ULTRALOW SULPHUR) (--- GAL)

DIAGNOSIS

Recommendation

Check seals and/or filters for points of contaminant entry. Laboratory test indicate that this fuel is suitable for use and meets all test requirements. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you filter this fluid before use. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

Corrosion

{not applicable}

Contaminants

There is a high amount of silt (particulates < 14 microns in size) present in the fuel. The water content is negligible.

Fuel Condition

All laboratory tests indicate that this sample meets specifications for No.2 ultra-low-sulfur diesel fuel (US EPA/CGSB-3.517-3 type B). The fuel is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0786856**	WC0786855	---
Sample Date		Client Info		**13 Dec 2023**	22 Feb 2023	---
Machine Age	hrs	Client Info		**0**	0	---
Sample Status				**SEVERE**	SEVERE	---

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		ASTM D1298*	0.839	**0.817**	0.815	---
Fuel Color	text	Visual Screen*	Yllow	**Red**	Pink	---
Visc @ 40°C	cSt	ASTM D7279(m)	3.0	**2.4**	2.7	---
Pensky-Martens Flash Point	°C	ASTM D7215*	52	**66**	66.3	---

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185(m)	10	**8**	7	---

DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D2887*	165	**177**	177	---
5% Distillation Point	°C	ASTM D2887*		**190**	192	---
10% Distill Point	°C	ASTM D2887*	201	**198**	200	---
15% Distillation Point	°C	ASTM D2887*		**204**	208	---
20% Distill Point	°C	ASTM D2887*	216	**211**	216	---
30% Distill Point	°C	ASTM D2887*	230	**226**	232	---
40% Distill Point	°C	ASTM D2887*	243	**241**	247	---
50% Distill Point	°C	ASTM D2887*	255	**256**	263	---
60% Distill Point	°C	ASTM D2887*	267	**271**	279	---
70% Distill Point	°C	ASTM D2887*	280	**285**	295	---
80% Distill Point	°C	ASTM D2887*	295	**302**	315	---
85% Distillation Point	°C	ASTM D2887*		**314**	327	---
90% Distill Point	°C	ASTM D2887*	310	**325**	340	---
95% Distillation Point	°C	ASTM D2887*		**345**	357	---
Final Boiling Point	°C	ASTM D2887*	341	**359**	367	---

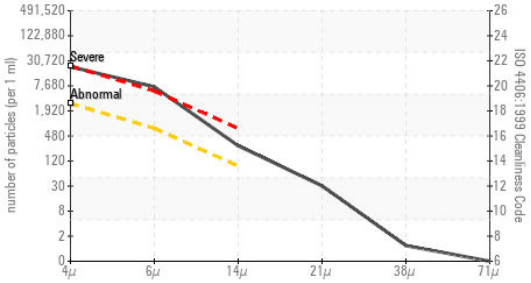
IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D1298*	37.7	**41**	42	---
Cetane Index		ASTM D4737*	<40.0	**56**	59	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	<1.0	**0**	<1	---
Sodium	ppm	ASTM D5185(m)	<0.1	**<1**	0	---
Potassium	ppm	ASTM D5185(m)	<0.1	**0**	0	---
Water	%	ASTM D6304*	<0.05	**0.002**	0.003	---
ppm Water	ppm	ASTM D6304*	<500	**19**	32.4	---

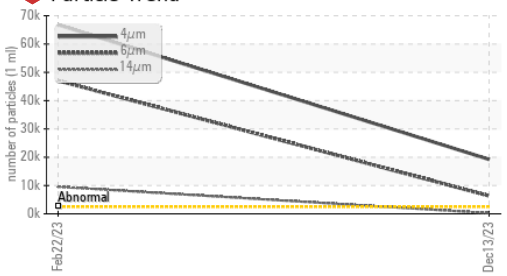
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	▲ **19225**	66822	---
Particles >6µm		ASTM D7647	>640	**6337**	47059	---
Particles >14µm		ASTM D7647	>80	▲ **246**	9556	---
Particles >21µm		ASTM D7647	>20	**27**	2679	---
Particles >38µm		ASTM D7647	>4	**1**	82	---
Particles >71µm		ASTM D7647	>3	**0**	4	---
Oil Cleanliness		ISO 4406 (c)	>18/16/13	**21/20/15**	23/23/20	---

FUEL REPORT

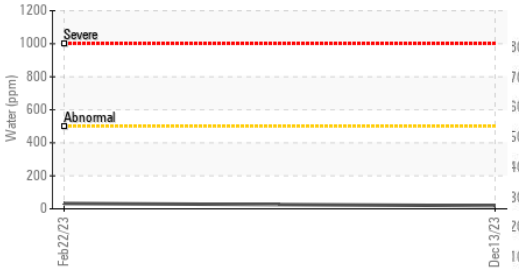
Particle Count



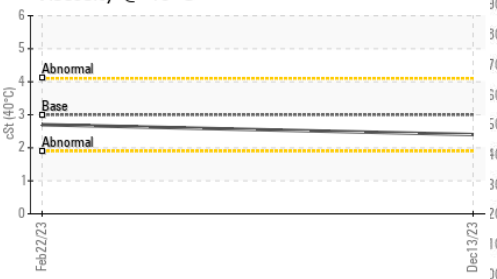
Particle Trend



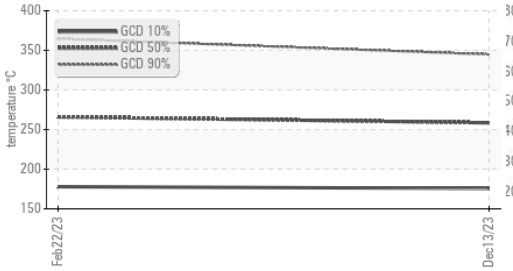
Water (KF)



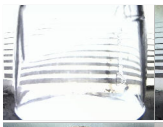
Viscosity @ 40°C



Gas Chromatography (GCD)

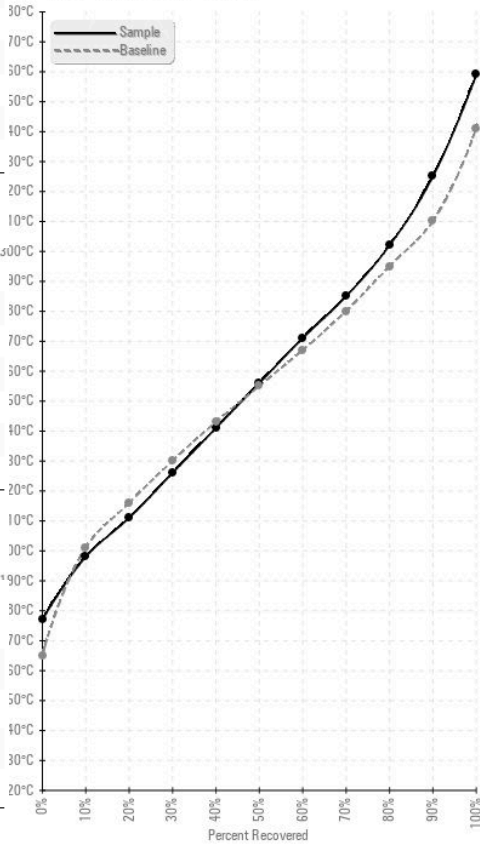


HEAVY METALS		method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185(m)	<0.1	**0**	<1	---
Nickel	ppm	ASTM D5185(m)	<0.1	**0**	0	---
Lead	ppm	ASTM D5185(m)	<0.1	**<1**	<1	---
Vanadium	ppm	ASTM D5185(m)	<0.1	**0**	0	---
Iron	ppm	ASTM D5185(m)	<0.1	**0**	<1	---
Calcium	ppm	ASTM D5185(m)	<0.1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

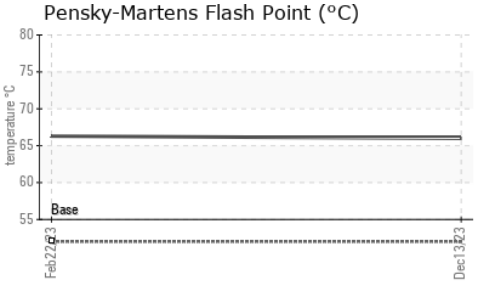
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					*no image*
Bottom					*no image*

GRAPHS

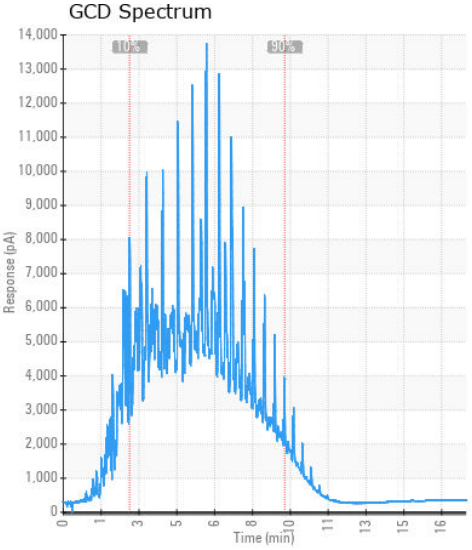
Fuel Distillation Curve



Pensky-Martens Flash Point (°C)



GCD Spectrum



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0786856 **Recieved** : 05 Jan 2024
Lab Number : 02606853 **Diagnosed** : 08 Jan 2024
Unique Number : 5707939 **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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