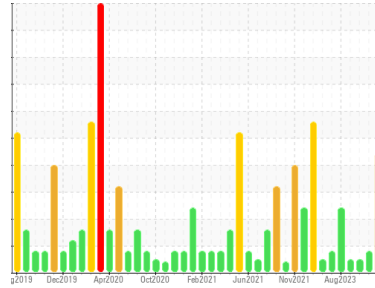


Area  
**Cranes**  
Machine Id  
**Crane - Fwd Fuel Sample (S/N Sample Tag: MA-04003)**  
Component  
**Diesel Fuel**  
Fluid  
**No.2 DIESEL FUEL (LOW-SULPHUR) (--- GAL)**



## DIAGNOSIS

### Recommendation

We advise that you check all areas where contaminants can enter the system. Laboratory test indicate that this fuel is suitable for use and meets all test requirements. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. 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. Resample in 30-45 days to monitor this situation.

### Corrosion

(not applicable)

### Contaminants

There is a high amount of particulates (2 to 100 microns in size) present in the fuel. The water content is negligible.

### Fuel Condition

The fuel is still serviceable provided that the contaminant(s) can be reduced to acceptable levels. 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).

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>PC</b>	WC	PC
Sample Date	Client Info	<b>24 Jan 2024</b>	16 Jan 2024	18 Dec 2023
Machine Age	hrs	<b>0</b>	0	0
Sample Status		<b>SEVERE</b>	ATTENTION	NORMAL

## PHYSICAL PROPERTIES

method	limit/base	current	history1	history2		
Specific Gravity	ASTM D1298*	0.839	<b>0.854</b>	0.856	0.847	
Fuel Color	text	Visual Screen*	<b>Yellow</b>	Yellow	Yellow	
Visc @ 40°C	cSt	ASTM D7279(m)	3.0	<b>2.9</b>	2.7	2.7
Pensky-Martens Flash Point	°C	ASTM D7215*	52	<b>65.7</b>	66.1	62.5

## SULFUR CONTENT

method	limit/base	current	history1	history2		
Sulfur	ppm	ASTM D5185(m)	250	<b>10</b>	8	18

## DISTILLATION

method	limit/base	current	history1	history2		
Initial Boiling Point	°C	ASTM D2887*	165	<b>177</b>	178	174
5% Distillation Point	°C	ASTM D2887*		<b>205</b>	202	198
10% Distill Point	°C	ASTM D2887*	201	<b>216</b>	212	210
15% Distillation Point	°C	ASTM D2887*		<b>224</b>	220	218
20% Distill Point	°C	ASTM D2887*	216	<b>232</b>	228	227
30% Distill Point	°C	ASTM D2887*	230	<b>245</b>	240	241
40% Distill Point	°C	ASTM D2887*	243	<b>255</b>	251	253
50% Distill Point	°C	ASTM D2887*	255	<b>266</b>	261	265
60% Distill Point	°C	ASTM D2887*	267	<b>277</b>	272	278
70% Distill Point	°C	ASTM D2887*	280	<b>289</b>	283	291
80% Distill Point	°C	ASTM D2887*	295	<b>302</b>	296	307
85% Distillation Point	°C	ASTM D2887*		<b>311</b>	307	319
90% Distill Point	°C	ASTM D2887*	310	<b>321</b>	318	330
95% Distillation Point	°C	ASTM D2887*		<b>338</b>	338	351
Final Boiling Point	°C	ASTM D2887*	341	<b>353</b>	368	384

## IGNITION QUALITY

method	limit/base	current	history1	history2	
API Gravity	ASTM D1298*	37.7	<b>34</b>	33	35
Cetane Index	ASTM D4737*	<40.0	<b>45</b>	43	47

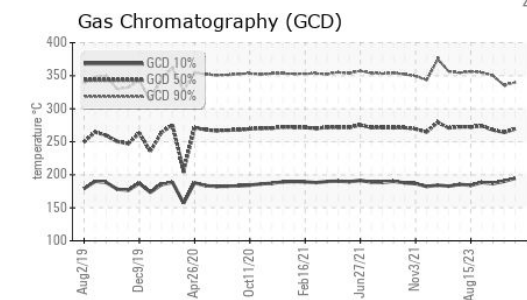
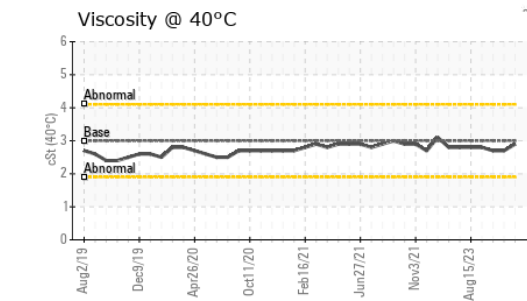
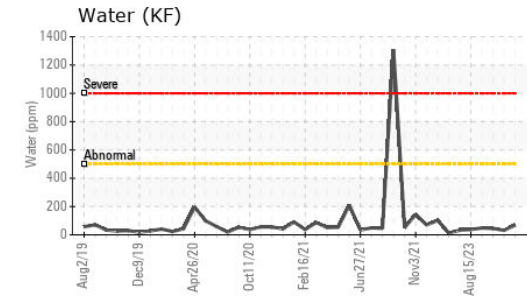
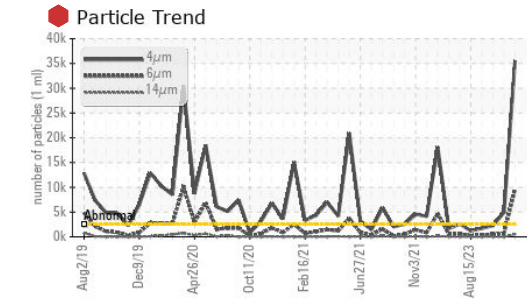
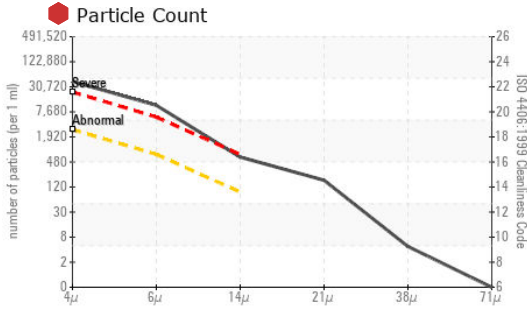
## CONTAMINANTS

method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	<1.0	<b>0</b>	0	0
Sodium	ppm	ASTM D5185(m)	<0.1	<b>&lt;1</b>	<1	0
Potassium	ppm	ASTM D5185(m)	<0.1	<b>0</b>	0	<1
Water	%	ASTM D6304*	<0.05	<b>0.006</b>	0.003	0.004
ppm Water	ppm	ASTM D6304*	<500	<b>68</b>	32	45

## FLUID CLEANLINESS

method	limit/base	current	history1	history2	
Particles >4µm	ASTM D7647	>2500	<b>35534</b>	4921	2260
Particles >6µm	ASTM D7647	>640	<b>9592</b>	624	509
Particles >14µm	ASTM D7647	>80	<b>553</b>	9	12
Particles >21µm	ASTM D7647	>20	<b>154</b>	2	2
Particles >38µm	ASTM D7647	>4	<b>4</b>	0	0
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>18/16/13	<b>22/20/16</b>	19/16/10	18/16/11

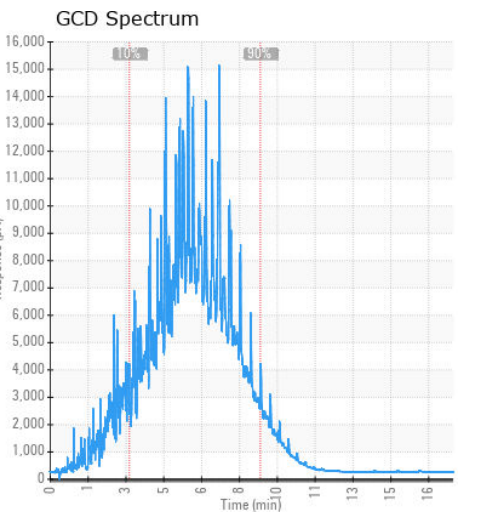
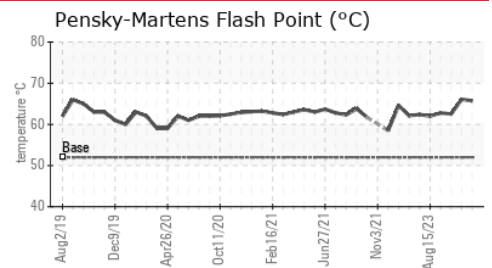
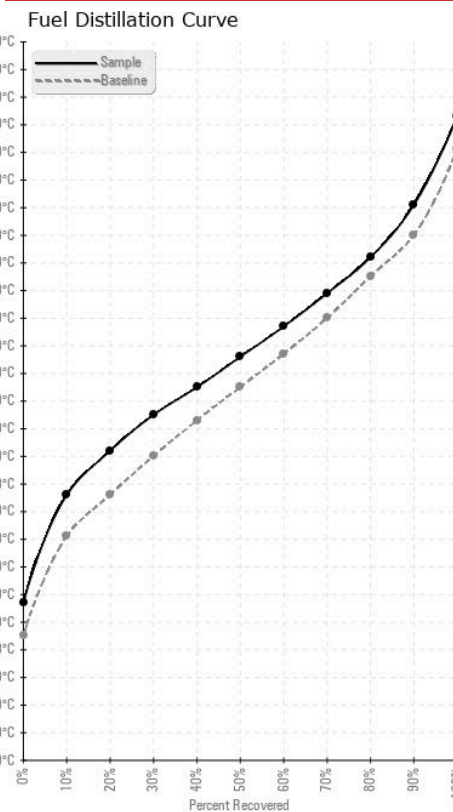
# FUEL REPORT



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	0	0	<1
Calcium	ppm	ASTM D5185(m)	<0.1	0	0	0
Magnesium	ppm	ASTM D5185(m)	<0.1	0	0	0
Phosphorus	ppm	ASTM D5185(m)	<0.1	<1	0	<1
Zinc	ppm	ASTM D5185(m)	<0.1	0	0	0

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC  
**Lab Number** : 02611322  
**Unique Number** : 5720417  
**Test Package** : FUEL ( Additional Tests: Bottom, CC Flash, GC-PercFuel, PrtCount )

**Suncor - Terra Nova Projects**  
 Scotia Centre, 235 Water Street  
 St. John's, NL  
 CA A1C 1B6  
 Contact: Josh Hynes  
 joshhynes@suncor.com  
 T: (709)778-3575  
 F: (709)724-2835

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.