



# FUEL REPORT

Sample Rating Trend

**NORMAL**

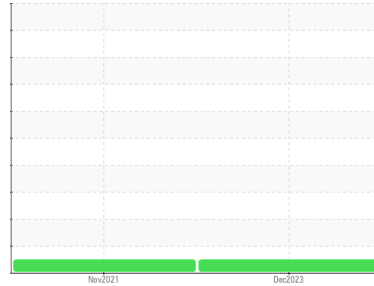


Area  
**FREEDOM MOBILE [151950]**

Machine Id  
**79445792**

Component  
**Diesel Fuel**

Fluid  
**No.2 DIESEL FUEL (ULTRALOW 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 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>CU0022420</b>	CU0018558	---
Sample Date	Client Info			<b>14 Dec 2023</b>	15 Nov 2021	---
Machine Age	hrs	Client Info		<b>211</b>	180	---
Sample Status				<b>NORMAL</b>	NORMAL	---

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		ASTM D1298*	0.839	<b>0.844</b>	0.851	---
Fuel Color	text	Visual Screen*	Yellow	<b>Pink</b>	Pink	---
Visc @ 40°C	cSt	ASTM D7279(m)	3.0	<b>2.7</b>	2.6	---
Pensky-Martens Flash Point	°C	ASTM D7215*	52	<b>64.1</b>	60.1	---

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185(m)	10	<b>8</b>	11	---

DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D2887*	165	<b>176</b>	157	---
5% Distillation Point	°C	ASTM D2887*		<b>200</b>	191	---
10% Distill Point	°C	ASTM D2887*	201	<b>210</b>	202	---
15% Distillation Point	°C	ASTM D2887*		<b>217</b>	211	---
20% Distill Point	°C	ASTM D2887*	216	<b>225</b>	219	---
30% Distill Point	°C	ASTM D2887*	230	<b>238</b>	232	---
40% Distill Point	°C	ASTM D2887*	243	<b>250</b>	245	---
50% Distill Point	°C	ASTM D2887*	255	<b>262</b>	257	---
60% Distill Point	°C	ASTM D2887*	267	<b>275</b>	270	---
70% Distill Point	°C	ASTM D2887*	280	<b>289</b>	284	---
80% Distill Point	°C	ASTM D2887*	295	<b>305</b>	300	---
85% Distillation Point	°C	ASTM D2887*		<b>317</b>	310	---
90% Distill Point	°C	ASTM D2887*	310	<b>328</b>	322	---
95% Distillation Point	°C	ASTM D2887*		<b>345</b>	337	---
Final Boiling Point	°C	ASTM D2887*	341	<b>375</b>	348	---

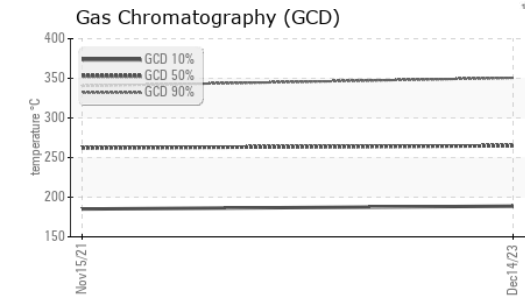
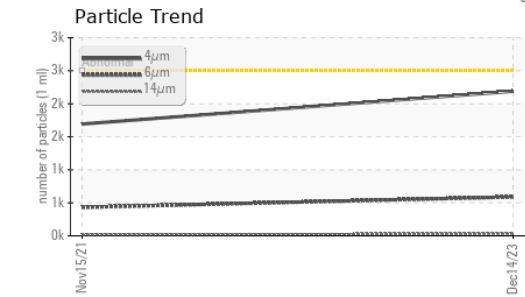
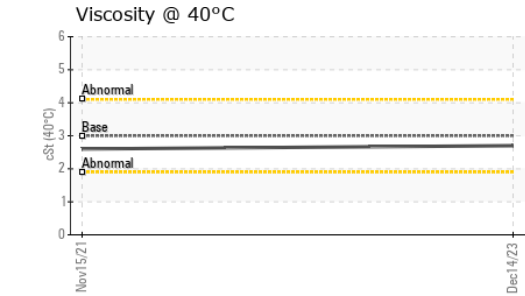
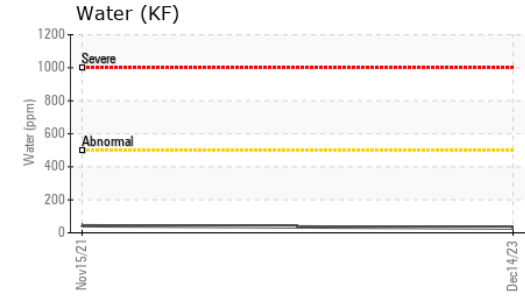
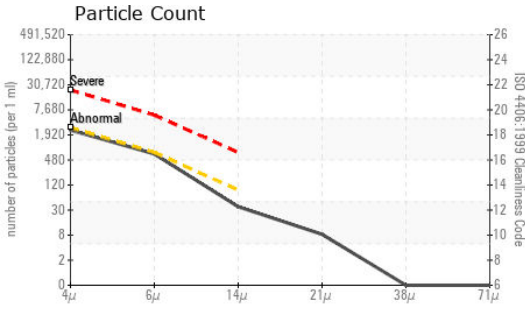
IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D1298*	37.7	<b>36</b>	34	---
Cetane Index		ASTM D4737*	<40.0	<b>48</b>	44	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	<1.0	<b>0</b>	0	---
Sodium	ppm	ASTM D5185(m)	<0.1	<b>0</b>	<1	---
Potassium	ppm	ASTM D5185(m)	<0.1	<b>&lt;1</b>	0	---
Water	%	ASTM D6304*	<0.05	<b>0.003</b>	0.004	---
ppm Water	ppm	ASTM D6304*	<500	<b>29</b>	43.0	---

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	<b>2189</b>	1693	---
Particles >6µm		ASTM D7647	>640	<b>589</b>	431	---
Particles >14µm		ASTM D7647	>80	<b>32</b>	17	---
Particles >21µm		ASTM D7647	>20	<b>7</b>	5	---
Particles >38µm		ASTM D7647	>4	<b>0</b>	0	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>18/16/13	<b>18/16/12</b>	18/16/11	---

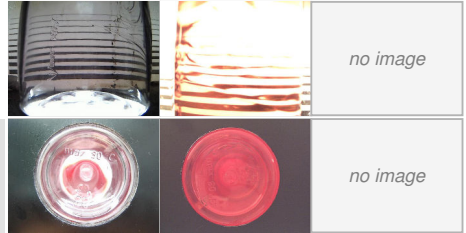


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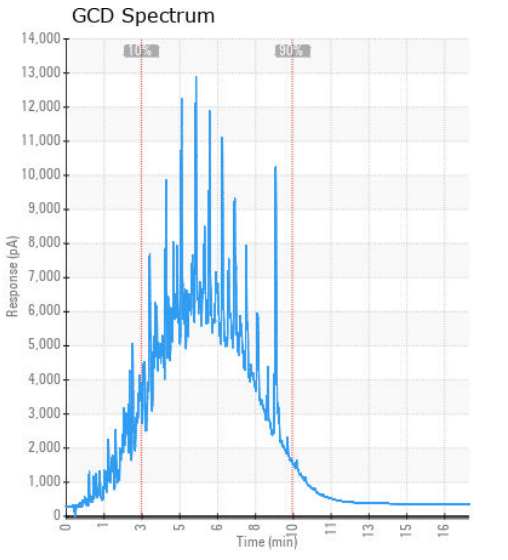
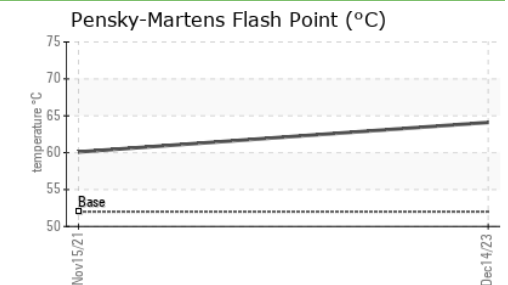
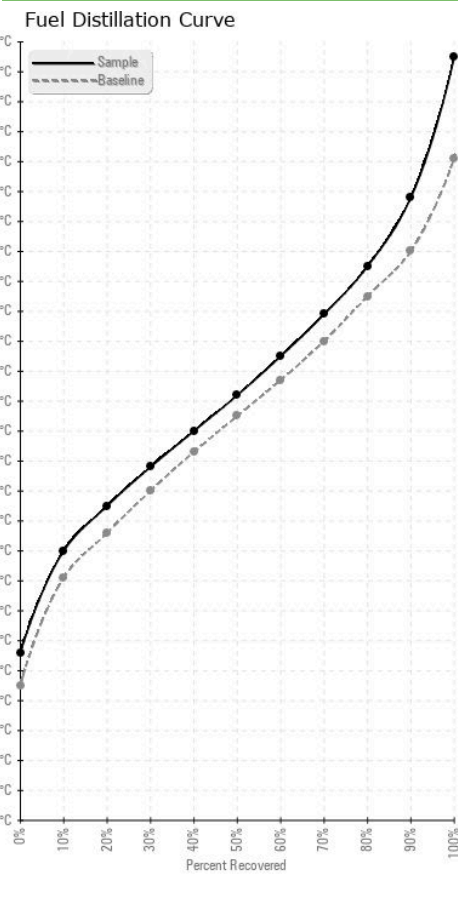


HEAVY METALS	method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185(m)	<0.1	0	---
Nickel	ppm	ASTM D5185(m)	<0.1	0	---
Lead	ppm	ASTM D5185(m)	<1	<1	---
Vanadium	ppm	ASTM D5185(m)	<0.1	0	---
Iron	ppm	ASTM D5185(m)	<0.1	<1	---
Calcium	ppm	ASTM D5185(m)	<0.1	<1	---
Magnesium	ppm	ASTM D5185(m)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

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					



## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CUMMINS CANADA ULC - GENERATOR DIVISION  
**Sample No.** : CU0022420 **Received** : 20 Dec 2023 **7175 PACIFIC CIRCLE**  
**Lab Number** : 02604539 **Diagnosed** : 27 Dec 2023 **MISSISSAUGA, ON**  
**Unique Number** : 5697624 **Diagnostician** : Kevin Marson **CA L5T 2A5**  
**Test Package** : FUEL ( Additional Tests: CC Flash, GC-PercFuel, PrtCount ) **Contact: Elisia Johnson**  
*To discuss this sample report, contact Customer Service at 1-800-268-2131.* **elisia.johnson@cummins.com**  
*Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.* **T: (905)795-0050**  
*Validity of results and interpretation are based on the sample and information as supplied.* **F: (905)795-9252**