



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**[FLE.21.00088]**  
 Machine Id  
**FREIGHTLINER 222**  
 Component  
**Front Diesel Engine**  
 Fluid  
**PETRO CANADA DURON UHP 5W40 (21 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0561022</b>	WC0450371	WC0450313
Sample Date		Client Info		<b>25 Nov 2021</b>	06 Jan 2021	07 Jul 2020
Machine Age	kms	Client Info		<b>174263</b>	7534	6899
Oil Age	kms	Client Info		<b>0</b>	0	250
Filter Age	kms	Client Info		<b>0</b>	0	250
Oil Changed		Client Info		<b>N/A</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>80	<b>13</b>	12	10
Chromium	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>30	<b>3</b>	4	4
Lead	ppm	ASTM D5185(m)	>30	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>150	<b>1</b>	1	<1
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

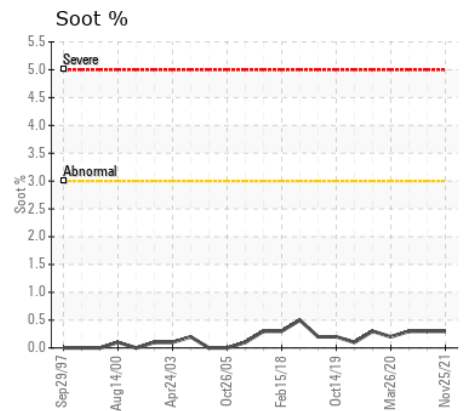
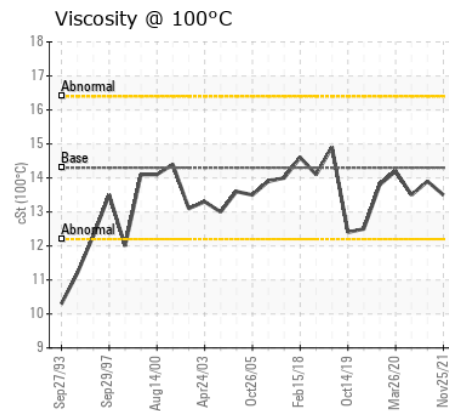
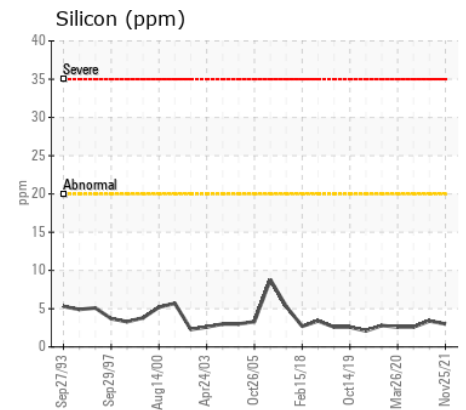
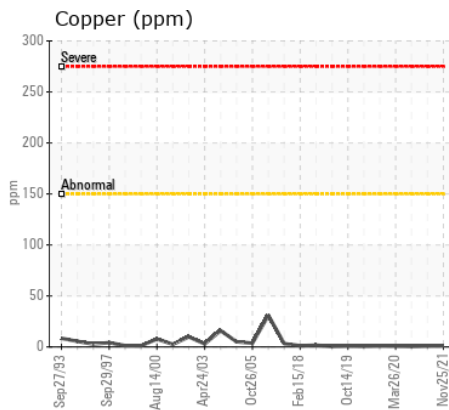
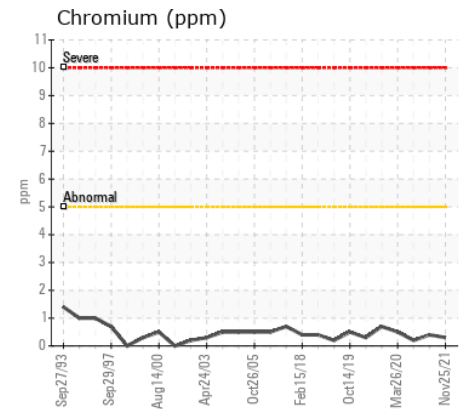
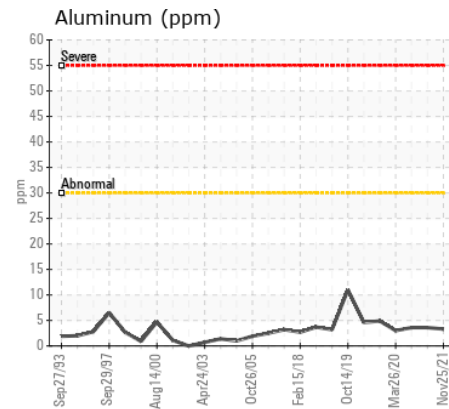
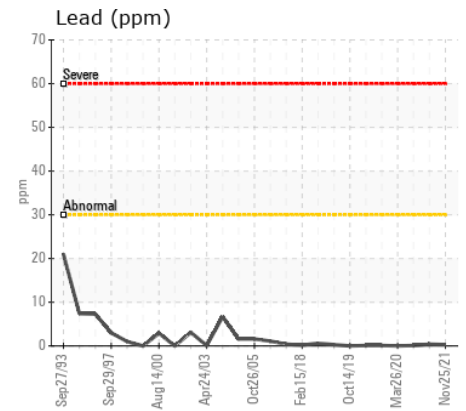
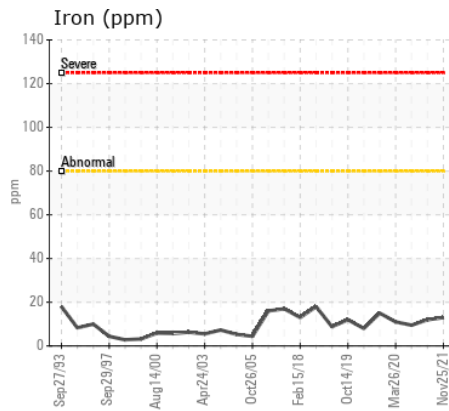
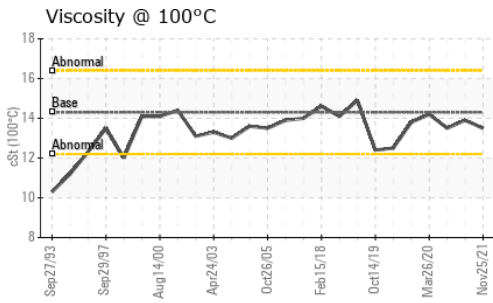
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>20	<b>3</b>	3	3
Potassium	ppm	ASTM D5185(m)	>20	<b>13</b>	3	8
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	0.0
Soot %	%	ASTM D7844*	>3	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	ASTM D7624*	>20	<b>11.0</b>	9.5	11.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>21.4</b>	19.8	26.1
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>4</b>	7	<1
Boron	ppm	ASTM D5185(m)	65	<b>27</b>	10	30
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	65	<b>58</b>	14	55
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	<b>1069</b>	259	1066
Calcium	ppm	ASTM D5185(m)	820	<b>850</b>	1763	819
Phosphorus	ppm	ASTM D5185(m)	1160	<b>999</b>	901	1009
Zinc	ppm	ASTM D5185(m)	1260	<b>1183</b>	1128	1214
Sulfur	ppm	ASTM D5185(m)	3000	<b>2771</b>	2968	2829
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>19.6</b>	17.6	19.4
Visc @ 100°C	cSt	ASTM D7279(m)	14.3	<b>13.5</b>	13.9	13.5



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **THE CORP/CITY OF SAULT STE MARIE**  
**Sample No.** : WC0561022 **Received** : 12 Jan 2024 **PUBLIC WORKS - STORES, 128 SACKVILLE ROAD**  
**Lab Number** : 02608429 **Diagnosed** : 12 Jan 2024 **SAULT STE. MARIE, ON**  
**Unique Number** : 5709515 **Diagnostician** : Wes Davis **CA P6B 4T6**  
**Test Package** : MOB 1 **Contact:** Jeff Morden

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.