



# OIL ANALYSIS REPORT

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

Machine Id  
**FREIGHTLINER 51974**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 10W30 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0854808</b>	WC0864036	WC0828177
Sample Date		Client Info		<b>28 Dec 2023</b>	12 Oct 2023	20 Jul 2023
Machine Age	kms	Client Info		<b>217631</b>	37584	105759
Oil Age	kms	Client Info		<b>31933</b>	37584	0
Filter Age	kms	Client Info		<b>31933</b>	37584	0
Oil Changed		Client Info		<b>Changed</b>	N/A	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>65	<b>22</b>	32	29
Chromium	ppm	ASTM D5185(m)	>5	<b>2</b>	4	6
Nickel	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>35	<b>14</b>	27	51
Lead	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	1
Copper	ppm	ASTM D5185(m)	>180	<b>28</b>	37	58
Tin	ppm	ASTM D5185(m)	>8	<b>&lt;1</b>	1	2
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

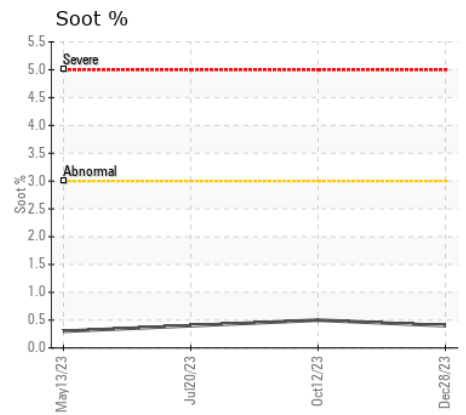
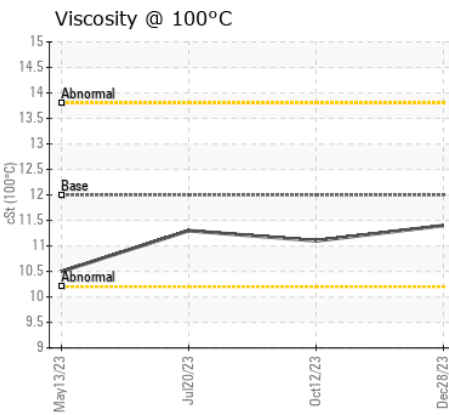
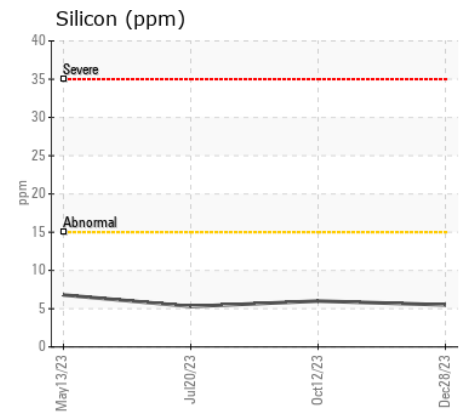
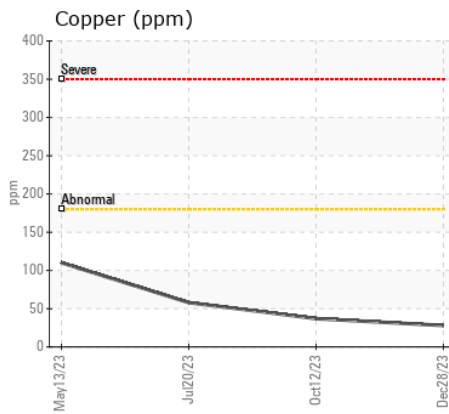
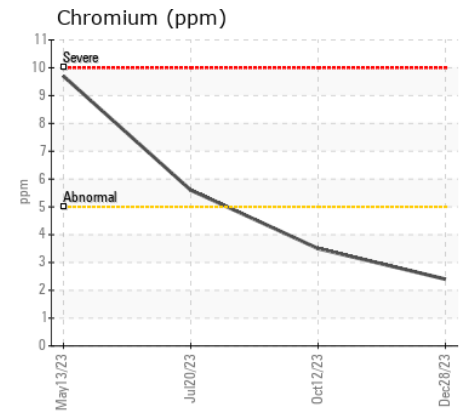
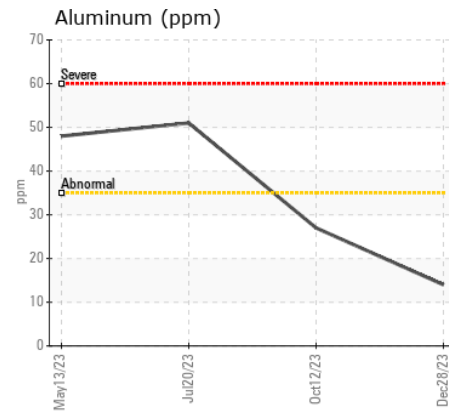
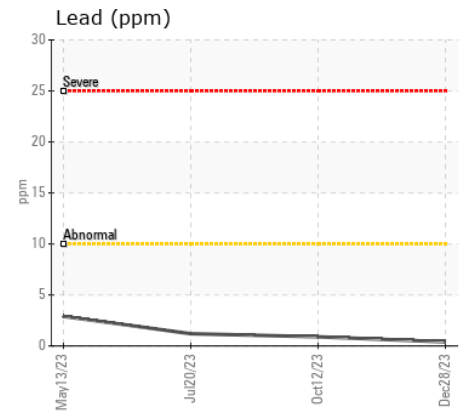
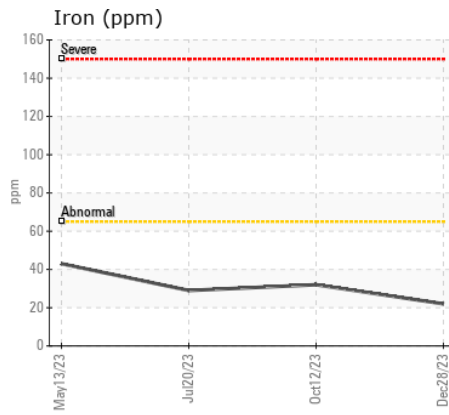
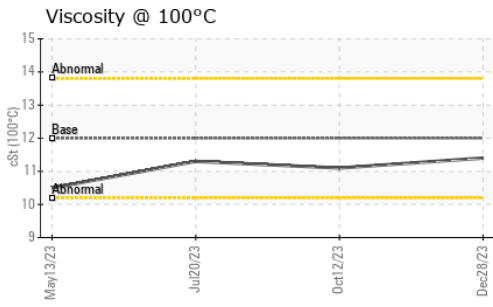
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<b>6</b>	6	5
Potassium	ppm	ASTM D5185(m)	>20	<b>27</b>	63	118
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	0.4
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0.4</b>	0.5	0.4
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.4</b>	9.6	9.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.1</b>	21.9	21.3
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>2</b>	3	3
Boron	ppm	ASTM D5185(m)	2	<b>3</b>	5	4
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	50	<b>60</b>	68	59
Manganese	ppm	ASTM D5185(m)	0	<b>0</b>	<1	1
Magnesium	ppm	ASTM D5185(m)	950	<b>972</b>	1066	950
Calcium	ppm	ASTM D5185(m)	1050	<b>1103</b>	1257	1177
Phosphorus	ppm	ASTM D5185(m)	995	<b>969</b>	1037	947
Zinc	ppm	ASTM D5185(m)	1180	<b>1175</b>	1312	1136
Sulfur	ppm	ASTM D5185(m)	2600	<b>2174</b>	2005	1730
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.0</b>	19.0	18.3
Visc @ 100°C	cSt	ASTM D7279(m)	12.00	<b>11.4</b>	11.1	11.3



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0854808 **Received** : 18 Jan 2024  
**Lab Number** : 02609641 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 5710727 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1

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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.