



# OIL ANALYSIS REPORT

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



Machine Id  
**FREIGHTLINER T-5**  
Component  
**Front Diesel Engine**  
Fluid  
**SAFETY-KLEEN ECOPOWER 15W40 CJ-4 (--- LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0772781</b>	WC0772810	WC0550237
Sample Date		Client Info		<b>18 Mar 2024</b>	21 Feb 2023	12 Apr 2022
Machine Age	kms	Client Info		<b>104146</b>	79415	63286
Oil Age	kms	Client Info		<b>10999</b>	5074	15004
Filter Age	kms	Client Info		<b>10999</b>	5074	15004
Oil Changed		Client Info		<b>Not Chngd</b>	Not Chngd	Not Chngd
Filter Changed		Client Info		<b>Not Chngd</b>	Not Chngd	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>65	<b>13</b>	12	16
Chromium	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185(m)	>3	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185(m)	>35	<b>3</b>	4	4
Lead	ppm	ASTM D5185(m)	>10	<b>0</b>	<1	1
Copper	ppm	ASTM D5185(m)	>180	<b>28</b>	14	37
Tin	ppm	ASTM D5185(m)	>8	<b>&lt;1</b>	<1	2
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

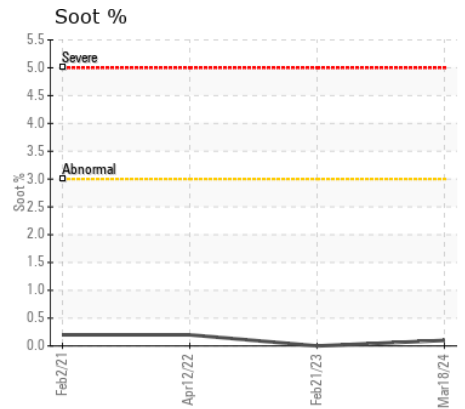
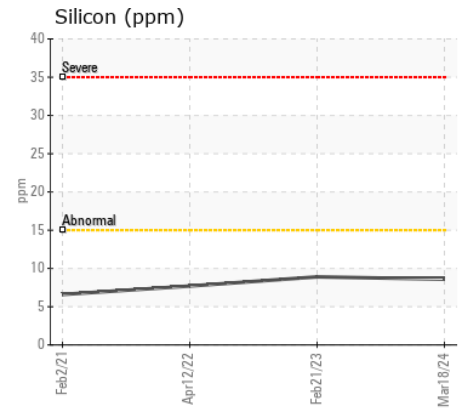
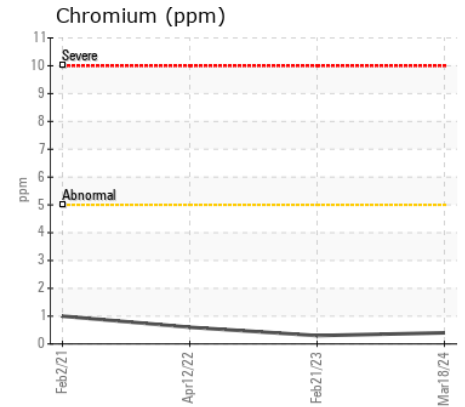
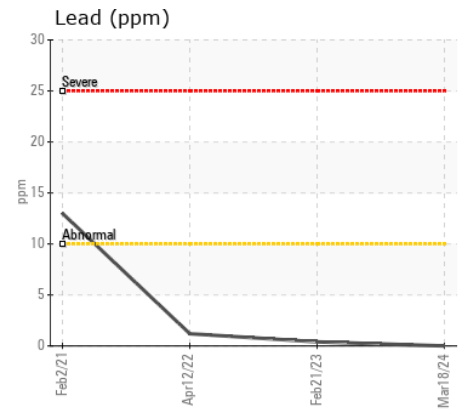
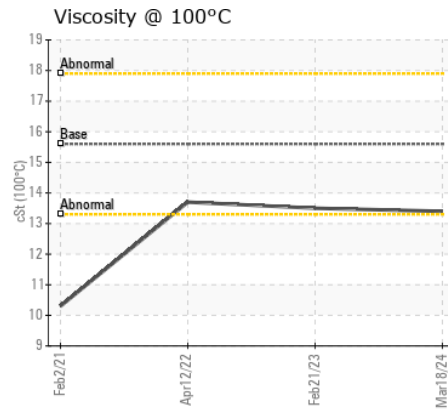
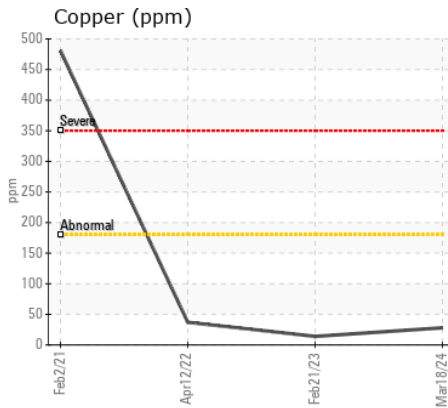
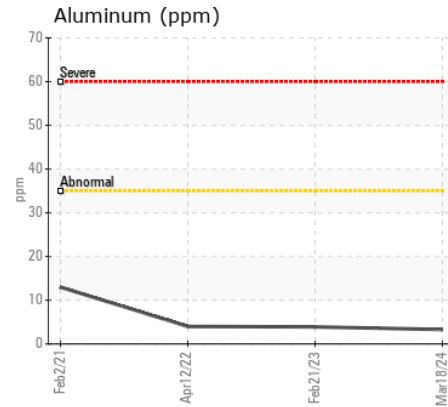
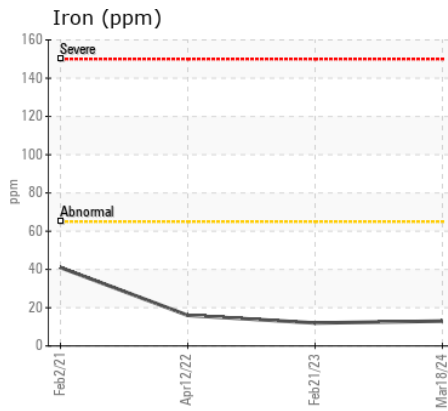
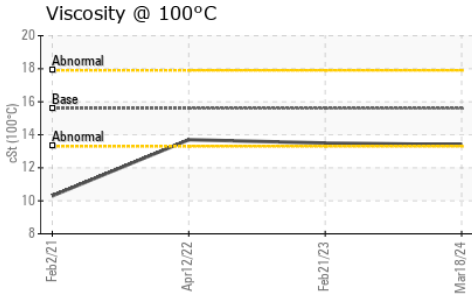
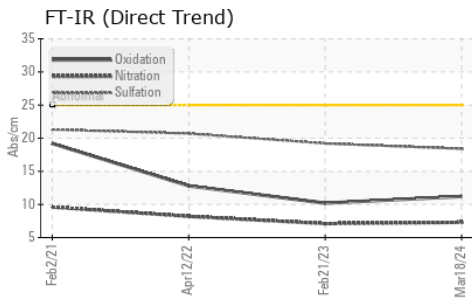
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<b>9</b>	9	8
Potassium	ppm	ASTM D5185(m)	>20	<b>3</b>	2	4
Fuel		WC Method	>3.0	<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	NEG
Soot %	%	ASTM D7844*	>3	<b>0.1</b>	0	0.2
Nitration	Abs/cm	ASTM D7624*	>20	<b>7.3</b>	7.1	8.2
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>18.4</b>	19.2	20.7
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>	2	2
Boron	ppm	ASTM D5185(m)	0	<b>8</b>	15	15
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	50	<b>9</b>	17	29
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	825	<b>52</b>	47	67
Calcium	ppm	ASTM D5185(m)	925	<b>2218</b>	2209	2117
Phosphorus	ppm	ASTM D5185(m)	850	<b>823</b>	910	887
Zinc	ppm	ASTM D5185(m)	1000	<b>994</b>	971	1044
Sulfur	ppm	ASTM D5185(m)	2250	<b>2723</b>	2891	2700
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>11.2</b>	10.2	12.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>13.4</b>	13.5	13.7



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0772781  
**Lab Number** : 02629520  
**Unique Number** : 5762652  
**Test Package** : MOB 1

**MIDDLESEX COUNTY ROAD DEPARTMENT**  
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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.